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THE

MECHANICS' INSTITUTE,

ORGANIZED MARCH 29, 1855.

Incorporated December 6th, 1869.

BUILDING OF THE ASSOCIATION, No. 29 POST STREET.

Library Hours, 8 a.m. to 10 p.m.

Terms of Membership :

Initiation Fee, on entering.	- - - - -	\$1.00
Quarterly Dues, in advance,	- - - - -	1.50
Life Membership, - - - - -	- - - - -	50.00
(Entitling the person to all the privileges of Membership.)		
Non-Resident or Visitors, (no entrance fee.)	- 50 cents per month.	

Officers,—1869.

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R E P O R T

OF THE

BOARD OF MANAGERS OF THE SEVENTH INDUSTRIAL EXHIBITION

OF THE

Mechanics' Institute of the City of San Francisco.

To the Members of the Mechanics' Institute.

GENTLEMEN:—

The Seventh Industrial Exhibition having been brought to a successful termination, we herewith, respectfully submit to you our Report.

The Exhibition held in the year 1868, having in every respect been a success, fully equal to the most sanguine expectations of its projectors, and having paid all the expenses of conducting it, and within \$8,010 87 of the cost of erecting the magnificent edifice on Union Square, you determined by resolution to hold a similar one during the Fall of 1869.

The lease from the City under which you held Union Square not expiring until December 31st, 1869, and the building with all the necessary apparatus and fixtures being left standing in excellent order and condition by the preceding Board, the wisdom of such a determination was apparent.

Early in 1869, circulars were forwarded to all parts of the United States, to the bordering countries on the Pacific and to some parts of China and Japan, informing the public that an Exhibition would be held in this City, free to the Industries of all nations. The City of San Francisco was at that time still unconnected with the rest of the United States by railroad and consequently being thus isolated did not command the confidence, she now does, nor was she as accessible.

As soon as practicable the services of Mr. Wm. J. Stoddart were secured as canvasser for this City, in order to obtain a proper representation of its industries, his work was beset with difficulties on account of the stringency of the money market, the indisposition of exhibition to incur the expense of fitting up and preparing a proper exhibit, two years in succession, but in the end he was entirely successful, a result due to his energy, faithfulness and business tact. The Board of Managers also secured the services of Mr. Wm. F. Herrick, who was deputed to go East, and at the principal manufacturing and industrial centers to obtain exhibits, and give a stimulus to the desire of the people there to visit San Francisco during the term of the Seventh Industrial Exhibition in this City, in this he was to some extent successful; among other exhibits brought here by his influence was the Pullman Palace Car, "Orleans," which attracted so much attention for the ten days it was on exhibition—being visited by over 40,000 persons. The difficulty your Society has labored under in the management of its season tickets which are clearly stated not to be transferable, and the loss consequent in a violation of this rule, induced your Board to adopt some method to remedy this evil and protect the interests of your Society. At the International Exposition held in Paris, 1867, season tickets were issued bearing the Photograph of the owner—who had to present it at the door on entering, thus, preventing its use by other persons—here it would have been almost impossible to have adopted this plan; but a system was arranged by the ingenuity of Mr. George Pardy, one of our colleagues,

whereby the same result was obtained in a much quicker, more agreeable and equally as efficient a manner, by the arrangement of series of figures plainly printed on the top edge of the ticket, and cancelled by the clerk when selling, according to the leading features of the purchaser, so when entering the building, and presenting the ticket, the door-keeper was able to tell pretty accurately if the proper owner presented it.

It is the opinion of the Board of Managers that it had the effect of Saving to your Society some \$2,000, and too much praise cannot be awarded to the originator of this very ingenious and successful plan.

As heretofore the price of tickets were placed at \$5 for a Gentleman and Lady for the season, \$3 for one person for the season, 50 cents single admission, and children under 12 years of age half price; to government officials who received their pay in currency, tickets were sold for currency. Schools were admitted at very much reduced rates, and the Public School girls free.

Various means have been adopted in the election or appointment of the committees of award. The usual method being for the Board of Managers to appoint the various Committees and announce the appointments to the exhibitors as soon after the opening of the Fair as possible. Another method has been tried by preceding Boards—to cause Exhibitors to elect their own jurors—thus taking all responsibility off from the shoulders of the Board of Managers—and still another method tried—was for the exhibitors to suggest names and the Board of Managers to appoint from the names suggested, the Board having an equal right to suggest names as the Exhibitors and to allow a certain number of days for Exhibitors to show cause why any name should be stricken off, none of these plans worked satisfactorily—the first plan generally giving the most satisfaction—the appointments in all these cases were usually made during the term of the fair and while the attention of the Managers was absolutely required around the building.

This year the Managers met fully a month before the opening of the Exhibition, and night after night carefully considered the persons who were to serve on the various Committees—by thus organizing these Committees of award during the calm and quiet time preceding the opening—much more judgment and care could be exercised in the selections. The appointment of these Committees is an important part of the work of the Managers—and on this hangs almost entirely the value of the endorsement of your Society so highly prized and eagerly sought after, the difficulty in obtaining competent persons willing to serve, can be best appreciated by those who have passed through this experience. The names of the persons thus appointed were not announced or made public, but they proceeded quietly with their work, obtained as a rule all the information desired or requisite, and made their awards without prejudice or undue influence being brought to bear upon them by interested parties. Whenever special information or more thorough examination was required, the Managers obtained the necessary facilities for the Committees without difficulty or hinderance. We believe there has been less dissatisfaction under this plan than any heretofore tried.

The matter of Rules and Regulations governing Exhibitors were carefully considered, and the following were adopted :—

Rules and Regulations of the Seventh Industrial Exhibition OF THE MECHANICS' INSTITUTE,

SAN FRANCISCO, 1869.

1. The Pavilion will be open for the reception of goods on Wednesday, September 1st. The Exhibition will be open to the public on Tuesday, September 14th, at 11 o'clock, A.M.

2. Applications for space must be made on or before August 28th, stating character of exhibit, amount and kind of, space required, (wall, table or floor). Blanks will be furnished for this purpose, and a clerk will be in attendance at the Library of the Mechanics' Institute, every day from 12 to 1, and 7 to 10, P.M.

3. All persons presenting articles for Exhibition and Premiums, must have them registered by the Receiving Clerk, who will give a receipt for the same,

which receipt must be presented when the articles are withdrawn, at the close of the Exhibition.

4. The name of every article must be attached by the exhibitor to it, and also a description, pointing out its merits, filed with the Board of Managers.

5. Judges will be appointed by the Board of Managers, immediately upon the opening of the Exhibition, to examine all articles presented, in accordance with Article III, and the Managers will award Premiums on such articles as the Judges shall declare most worthy, which will be delivered as soon as they can be prepared. Due notice will be given of the announcement of Premiums.

6. The mornings of each day, until 10 o'clock, will be appropriated to the Judges, and no visitors will be admitted during the time thus appropriated, except at the special request of the Judges, or by permission of the Managers.

7. In case of any misunderstanding application may be made to the Manager of the day, who will at all times be in attendance.

8. Articles intended for sale will be labeled accordingly, but cannot be removed until the close of the Exhibition, except by written permission of the Managers.

9. Steam power will be provided, so that machinery of all kinds may be seen in actual operation, and every facility possible, will be given to exhibit working machinery to the best advantage.

10. Proof of origin must be furnished when required.

11. It is particularly requested that every person who offers a new machine, improvement, or invention, will file with the Managers a description of its merits, in order that the attention of the Judges may be called thereto.

12. Perishable articles will be received or may be removed at any time during the Exhibition, with the consent of the Managers.

13. The most effectual means will be taken, through the agency of the police and otherwise, to guard and protect the property on exhibition; and it will be the purpose of the Managers that all articles shall be returned to the owners without loss or injury. Still, all articles deposited will be at RISK OF THE OWNERS.

14. Articles intended for Exhibition and PREMIUMS, must be entered AND PLACED ON EXHIBITION, on or before Saturday, September 18th.

15. The Managers are desirous that articles should be presented early. Those from abroad intended for exhibition should be properly packed, and if not consigned to exhibitor's agent, must be marked "Seventh Industrial Exhibition of the Mechanics' Institute of the City of San Francisco, Cal., care of J. H. GILMORE, Corresponding Sec'y". Articles from foreign countries should be accompanied with a certificate from the American Consul, in order that upon their arrival the proper course may be taken to have the duties remitted. All articles thus received, arriving too early, will be stored free of cost to the exhibitor, and the Managers will have them duly placed in proper position for exhibition. No freight charges will be paid by the Managers; but exhibitors are notified that arrangements have been made with the various transportation companies to repay freight charges on evidence of return of goods exhibited.

The Articles to be Exhibited were Classified as follows:

CLASSIFICATION OF EXHIBITS.

CLASS 1. *Machinery for the Application of Power.*

SECTION 1. STEAM ENGINES, BOILERS, ETC.—Comprising: Stationary Engines, Locomotive Engines, Marine Engines, Portable Engines, Air Engines, Steam Boilers and Appurtenances, Steam Generators of all kinds, Models, Designs, etc.

SECTION 2. HYDRAULICS, HYDROSTATICS AND PNEUMATICS.—Comprising: Water Wheels, Water Engines, Hydraulic Motors of all kinds, Hydrostatic Presses, Lifting Jacks, etc., Pumps and Parts thereof, Windmills, and all other machinery used in the application of Power not otherwise classed Models, Designs, etc.

CLASS 2.—*Machinery and Tools used in the Manufacturing and Producing Arts.*

SECTION 1. WOOD AND METAL FINISHING MACHINERY.—Comprising: Lathes, Drilling Machines, Shaping Machines, Planing Machines, Mortising Machines, Saw Mills and Sawing Machines, Shingle Machines. All other machinery employed in working Woods and Metals into a finished state, etc.

SECTION 2. MISCELLANEOUS MACHINERY.—Comprising : Grist Mill Machinery and parts thereof, Grain Cleaning Machinery, Milling Machinery of all kinds not otherwise classed, Hoisting Machinery for Streets and Stores, Cranes, Lever and Screw Presses, Scales, Horse Power, etc., etc., Mechanical Movements and Appliances of all kinds not otherwise classed, Models, Designs, etc.

CLASS 3.—Mining, Quarrying and Metallurgy ; Machinery and Appliances in connection therewith.

Comprising : Quartz Mills, Quartz Crushing Machinery, Amalgamators, Concentrators, Roasting and Smelting Furnaces, Ore Grinders and Pulverizers, Hoisting Works for Mines, Coal Cutting Machinery, Underground Ventilation and Appliances therefor, Timbering Mines, Safty Cages for Hoisting, Miners Tools, Machinery and Appliances used in the development of Mines, and the reductions of the products thereof not otherwise classed, Models, Designs, etc.

CLASS 4.—Agricultural Machinery, Implements and Tools.

Comprising : Steam Cultivators, Plows, Harvesters, Seed Planters, Grain Separators, Threshing Machines Reaping Machines, Bee Hives, Churns, Wine Presses and other Implements for Farm and Dairy Use, etc.

CLASS 5.—Naval, Military and Civil Engineering and Architecture.

SECTION 1. NAVAL ARCHITECTURE.—Comprising : Models and Designs of Ships of War and Commerce, Boats, Barges, and other vessels for water conveyance, Ship's Tackle, Rigging and furniture, Hemp and Metallic Cordage, etc.

SECTION 2 MILITARY ENGINEERING.—Comprising : Armor, Ordnances, Fire Arms, Tent and Camp Equipages, Gunpowder, and other Explosive Materials, Matches and Fuse, Pyrotechnics, etc.

SECTION 3. ARCHITECTURE AND CIVIL ENGINEERING.—Comprising : Architectural and Building Designs, Designs and Models for Buildings specially adapted for Earthquake Countries, Sanitary Appliances and Devices of Improvements directly connected with Building, Construction of Piers, Bridges, Bulkheads, etc., Fire and Common Brick, Rough and Cut Stone, and Tools for Cutting, Cements, Mortars, Lime, Artificial Stone, Building Materials generally, Marble Work as distinguished from the Fine Arts, Concrete, Cement and Asphaltum Piping, Machinery for preparing the same, Architectural and Civil Engineering, Drawings, etc.

CLASS 6.—Philosophical, Surgical and Dental Instruments.

Comprising : Electric Engines, Balances, Engineering Instruments, Nautical Instruments, Astronomical Instruments, Surgical Instruments, Dental Instruments, Philosophical Instruments, and processes of use, Optical Instruments, Chronometers, Watches and Clocks, etc., etc.

CLASS 7.—Manufacturers in Metals.

Comprising : Plain and Ornamental Castings, Stoves, and Stove Work, Wrought Iron Work, as Doors, Shutters, Safes, etc., Hardware Cutlery and Edge Tools, Wire Work, Brass, Tin, Lead, and other Metal finished work as Cocks, Valves, Bells, Gongs, Engineers' Findings, etc., Copper Stills, Worms, Pipes, etc., Lead Pipe, Sheet Lead, Shot, Plumbing and Gas Fitting, Tinware, etc.

CLASS 8.—Wood and its Manufactures.

Comprising ; Sawed Lumber, House Carpenters' and Joiners' Work, Scrolling, Turning, Moulding, Carving, Polishing, Cooperage work as Barrels, Casks, Kegs, Pails, etc., Willowware, Fine and Coarse Brushes, Articles of Household Economy as Washing Machines, Wringing Machines, etc.

CLASS 9.—Glass, Pottery, Earthenware, Etc.

Comprising : Sheet Glass, Glass Bottles, Globes, Mirrors, Crockery Ware, Stone Ware, Porcelain Ware, Glass Blowing and Cutting, Fire Proof Ware, etc.

CLASS 10.—Minerals, Geological Formations, Chemical Substances, Chemistry, Oils, Soaps, Candles, Dyeing, Distilling, Etc.

Comprising : Coal, Ores, Geological Specimens, Alkalies, Acids, Pharmaceutical Manufactures, and Processes of Production ; Oils—Animal, Vegetable and Mineral ; Turpentine, Pitch, Tar, Rosin, Candles, Soaps, Paints, Colors, Varnishes, Emery and other Polishing Substances, etc.

CLASS 11.—*Jewelry, Silver and Plated Ware.*

Comprising : Jewel and Precious Metal Ornaments, and Precious Stones and Imitations, Lapidary Work, Silver Plating, Silver Ware, Gilding, Watch Cases, Gold Pens, Hair Jewelry, Galvano Plastic, India Rubber, Jewelry, Dentistry Work, Process of Silvering Mirrors, etc.

CLASS 12.—*The Art of Printing and Printing Presses, Lithography, Engraving, Bookbinding, Paper, Type, etc.*

Comprising : The Art of Lithography and Materials used, Steel and Wood Engraving as distinguished from the Fine Arts, Electrotyping, Book binding, Fancy Boxes and Works of Papier Mache, Paper of all Varieties and Material therefor, Articles of Stationery, Paper Ruling, etc.

CLASS 13.—*Land Conveyances and Materials, and tools used in Manufacturing.*

Comprising : Carriages, Cars, Wagons, Buggies, Barouches, Carts, Veloeipedes, Carriages and Wagon Makers' Materials, Blacksmiths' and Carriage Makers' Tools, Carriage Trimmings, etc., etc.

CLASS 14.—*Leather and its Manufactures, India Rubber Goods.*

Comprising : Harness, Harness Trimmings, Saddlery, Boots and Shoes, Hose, Trunks, Valises, Buckets, Fire Caps, Leather Belting, India Rubber Goods of all kinds, (excepting Jewelry), etc.

CLASS 15.—*Furniture, Billiard Tables, Show Cases, Upholstery, Picture and Mirror Frames.*

Comprising : Household Furniture, Office Furniture, School Furniture, Billiard Tables, Billiard Balls, Cues and Trimmings, Inlaid Work, Ten Pins, Spring Mattresses, Upholstery, Carpets, Oil Cloths, Paper Hangings, etc.

CLASS 16.—*Arts—Fine and Ornamental.*

SECTION 1. LANDSCAPE, PORTRAIT AND MARINE PAINTING.—Comprising : Painting in Oil and Water Colors, Drawing in all its branches (except Engineers' and Architects' Designs), etc.

SECTION 2. Comprising : Sculpture, Statuary, Plaster Works of Art, Porcelain Paintings, Articles of Virtu as Bohemian Glass, Vases, Ornaments, etc., Coloring, Embossing, and Staining on Glass, Penmanship, Photography, Photographie Views and Apparatus, Photographie Materials, Photographie Improvements, Plain, Retouched and Colored Photographs, etc., (no premiums for Photography) Fine Steel and Wood Engravings Wax Work, Cromo Lithographs, etc.

SECTION 3. Comprising : Sign Painting, Lettering, Ornamentations in Oil and Water Colors, Seenie Painting, Staining on Wood, Graining, etc.

CLASS 17.—*Musical Instruments.*

Comprising all Musieal Instruments and parts thereof.

CLASS 18.—*Fibrous and Textile Substances as Wool, Cotton, Silk, Furs, Etc.**Raw and Manufactured.*

SECTION 1 WOOL AND WOOLEN MANUFACTURES.—Comprising : Wool and all Articles made of Wool and Mixed Materials, Cotton and Cotton Manufactures, Ramie, etc.

SECTION 2. SILK AND ITS MANUFACTURES.—Comprising : Silk Culture, Cocoons, Raw and Manufactured Silk, Furs, Clothing, Hats, Caps, etc.

CLASS 19.—*Sewing Machines and Needle Work.*

Comprising : Sewing Machines and Improvements thereon, Sewing Machine Work, Dressmaking Mantua Making, Millinery and Fancy Goods, etc. (No Premiums for Sewing Machines or Sewing Machine Work.)

CLASS 20.—*Horticulture, Agriculture, Substances Used for Food, Etc., Vinous Products.*

SECTION 1.—Comprising : Flowers, Plants, Agricultural Products, Fruits and Vegetables, Tobacco, Raw and Manufactured, etc.

SECTION 2. NATURAL AND MANUFACTURED PRODUCTS.—Comprising : Flour, Wheat, Grain, Seed, Bread and Crackers, Fresh and Dry Macaroni, etc., Spices, Mustard, Coffee, Chickory, Preserved Fruits, Fish, Meats, Vegetables, Pickles, Vinegar, Sugar, Candy, Syrups, etc.

SECTION 3. Comprising : WINES, BRANDIES AND VINOUS PRODUCTS.

CLASS 21.—*Miscellaneous Articles not Comprised in any of the Foregoing Classes.*

PREMIUMS.

Your Society not being the recipient of money donations, to be given as premiums, determined to offer the following prizes:

There will be the following Premiums awarded, besides Diplomas, etc.:

A GOLD MEDAL, known as the INSTITUTE MEDAL, valued at \$200, which will be awarded to that INVENTION, INDUSTRIAL PRODUCT, or MANUFACTURE, which in opinion of the Judges, will be the greatest benefit and value to the people of California.

There will be a GOLD MEDAL awarded to the most valuable display of products or manufactures in each class, or twenty-one gold medals in all.

There will also be awarded as special premiums, sixty-three silver medals, which will be apportioned according to the value of the several classes represented.

There will not be any Premiums awarded for Sewing Machines or Sewing Machine Work, nor for Photography in any of its branches.

The die which had been used for some years for the medals awarded, was broken in striking off the medals for the Exhibition of 1868, and it was necessary to have a new die cut, it was placed in the hands of Mr. A. W. Stott, who worked long and patiently in completing a die which would do honor to the Mechanics' Institute, and be a credit to himself; it was completed about the 25th of September, and was placed in the hands of one of the most skillful die temperers on this coast, in the process of tempering, it cracked and was rendered useless, a result both unfortunate, unforeseen, and impossible to prevent; in consequence of this mishap, Mr. Stott was immediately commissioned to prepare another die which he has completed, and is in every respect equal to the first in workmanship, and is superior in homogeneity of metal.

It was thought advisable to have an entirely new design for a Diploma, and Messrs. Britton & Rey, were commissioned to prepare the same, which has been done in a very creditable and satisfactory manner.

The 14th day of September was set for the opening of the Seventh Industrial Exhibition, it being considered appropriate to open such an Industrial Exhibition on the Centennial Anniversary of the birth of that great man, Baron Von Humboldt, and accordingly on that day at 11 A. M., the ceremony took place at the Pavilion, in the presence of a large assemblage, the pupils of the Denman School, 300 in number took part in the exercises by singing the opening Chant, and several songs, under the leadership of Mr. Washington Elliot; the stand was erected near the centre of the fountain and occupied by Hon. W. H. Seward, Gen. Ord, the Officers of the Mechanics' Institute; Rev. M. C. Briggs, Chaplain, Irvine M. Scott, orator, and others. The appearance of the venerable Statesman, ex-Secretary Wm. H. Seward was the signal for unbounded enthusiasm, as soon as this subsided the President of the Mechanics' Institute came forward and made the following preliminary remarks, extracted from the "Alta."

It would be proper on this, the opening day of the Seventh Industrial Exhibition of the Mechanics' Institute, to say a few words about the Society over which I have the honor of presiding. You see around you everything still in confusion. The cause of this is that exhibitors think they can arrange their goods in a few hours, and they have postponed preparations until the last moment. But the work is now progressing rapidly, and in a few days everything will be properly arranged. The Board of Directors have done all in their power to have everything in readiness, and to make the present Fair, as it will undoubtedly be, a grand success. There are now about nine hundred articles entered for exhibition, and many others have been unable to get room. We have received goods from many of the States, the Isles of the Pacific, China, Japan—and we are also to have articles from Mexico and Peru, which will be here in about two weeks. The Mechanics' Institute was organized on the 6th of March, 1855—over fourteen years ago. The members held their first meeting December 11, 1854, at which time the city had a population of 55,000. There was not then much civilization here—open gambling houses were on every corner, and there was none to rebuke or disapprove. Here where this building now stands was a waste of sand, and the Mission Dolores was a long way out in the country. That Mission was founded in the year of the signing of the Declaration of Independence. When the Institute was formed the members looked to the future for success. Then the only means of reaching

this coast from the East were, a three months journey across the plains with ox teams; by way of the Isthmus; or around the Horn. Now we are but a few days journey from the East—the great Pacific Railroad spans the continent. He then referred to the struggles through which the Institute had passed to success, and hoped that the present receipts of the Fair would go far towards relieving them of their remaining \$50,000 debt. He said they now numbered 1,300 members, but hoped soon to have at least 3,000. It is the only Industrial Society on the coast, and he hoped young men would feel persuaded that there were other and better pursuits than being clerks, etc. He knew it was not fashionable to be a mechanic, but he was not ashamed to have calloused hands; it was honorable. He urged the girls of the State Normal and Denman Schools, who were present, to encourage the idea of learning trades and help to remove the feeling that it is wrong to be a mechanic. He then referred to the splendid building belonging to the Institute on Post street. They had a fine reading-room and a library containing 15,000 volumes, and he extended a cordial invitation to visitors to visit the rooms.

After which the pupils of the Denman School chanted a piece with fine effect. The Rev. M. C. Briggs then delivered a fervent prayer, invoking the Providence of Almighty God on the undertaking.

The pupils then sang "Lo the Words" after which the President introduced Irving M. Scott, Esq., who delivered the following

OPENING ADDRESS.

In arts, sciences, and mechanical inventions, in manufacturing progress, we have our days of review—landmarks by which we observe every deviation from the usual path, every innovation upon established usage. Taking a hint from the past, courage from the present, we boldly strike into the future, with full faith that the result of our efforts will lift us above the plane of the past. This is the day set apart for us to review the victories of art, discoveries of science, and the advancing steps of invention; this is our commencement day, to notice the progress and improvements, the perfection and convenience of our age: this spacious building, crowded with the trophies of peaceful labor, speaks, with eloquence of action, the earnestness of our civilization. From these yearly comparisons, these milestones of progress, we note the onward march of events. This day, for another and higher reason, should be the inspiration point for art and science to buckle on their armors and go forth to nobler conquests. One hundred years ago at the Castle of Tegel, was born the great scientist, the explorer of the earth's surface, the expounder of the underlying and overlying strata of its crust, the father of physical geography, the author of cosmos, blending naturalist, artist, geologist, and traveler in wonderful degree. Humboldt is the Colossus on the field of scientific labor. His was a lifetime of work—and, measured how we may, is unparalleled. Thoughts and ideas which he started, gathered strength as time sped, until he received the homage of the world. The years since his birth are crowded with the grandest achievements of man.

Six years later, the Declaration of Independence thrilled the heart of the world. In this democracy, arts and science received an impulse which carried them up to high-water mark. Steamboats, railroads, telegraphs, sewing machines, cylinder presses, and a host of beneficent inventions came crowding from the brain of a Republic in which all men are equal.

We are celebrating our Seventh Exhibition in the Queen City of the Western slope—a city whose foundations, rocked by earthquakes, washed by the waters of an ocean, freighted with the richest memories of the oldest civilization, holding in her lap the wealth of continents, tied to the Occident with indissoluble bands of commerce and self-interest, and to the Orient with bands of steel and a common ancestry, in whose harbor may float the navies of the world—a city full-fledged, where all was primeval nature when Humboldt looked from Chimborazo's peak in 1802.

So rapid and marvelous has been this growth, that the mind scarce comprehends that half a continent has been reclaimed from savage rule, filled with people, interlaced with iron ways; and this, its outpost on the westward march, just nineteen years old, changing the current of exchange, dividing the world's commerce, and carrying the banner of progress "full high advanced." Seventeen hundred and sixty-nine was the date of Arkwright's first patent for a cotton spinner. Now one man spins more yarn than four hundred could in Arkwright's day.

As much flour is made by one man now as one hundred and fifty could make a century ago.

One woman makes as much lace as one hundred did in seventeen hundred and sixty-nine—and wears it, too.

Sugar is refined in as many days as it once took months.

One hundred years ago it took six months to fix quicksilver to glass; now forty minutes.

The tedious days of the sickle, followed by the flail,

"Throbbing mellow music down the vale,"
winnowed by the winds of heaven; the gleaner Ruth and the threshing floor of Boaz

have passed away for a machine to the "manor born," which euts, threshes, cleans and sacks the grain from twenty acres a day.

This progress is solicitous of man's comfort. In 1569, a bath of boiling oil was applied for amputation—a custom as barbarous as the age was uncouth. Then came "reform and chloroform," when every faculty rested and the patient roused from slumber to find the dreaded deed done. Science, ever watchful, ever advancing, turns another page—freezes the parts operated on, with brains, heart and nerves in full play; the patient, an observer of painless amputation, himself the subject.

In medicine, the days of blood a pint, and physic a quart, yield to reason and a knowledge of the laws of health. The "ounce of prevention" is recognized as the fundamental principle.

The age is liberal—the martyrdom of Latimer and Ridley is replaced with the unity of sects in the advancing march of Christian progress. In our infancy, Salem jail was crowded with suspected witches, and Cotton Mather hurled his invectives at Corey, whose foreshore years could not save him from death.

Less than a hundred years ago, the terrors of the Cock Lane ghost shook England's faith to the center. Now the iconoclast—the common school—knocks the idol of superstitions to pieces; planchette is a household toy, painting the faces of absent spirits. And who's afraid?

Thirty-eight years ago Professor Low, of St. Joseph's College, Bardstown, Ky. was dismissed for writing a pamphlet advocating a national railroad from the Atlantic to the Pacific. The Faculty judged him insane. Now, from this very city, we can step into a Pullman palace car, furnished with regal luxury, carrying our own provisions, travel across valleys, climb mountains, span rivers, and neither change cars nor stop for three thousand miles—over one country, having one language, protected by one flag;—and the builders of this enterprise we call the representative men of our day.

In seventy-eight days of pleasure we can follow the sun around the world to our point of starting—instead of thirty-six months of tedious travel—carrying with us the condensed luxuries of the land, and send our thoughts home on swift-winged messengers, the final result of Franklin's experiment.

"Through the shadows of the globe we sweep into the younger day;

Better fifty years of *our time* than a cycle of Cathay."

When we see the tenderness and liberality of to-day—the economy of time, of space, of Machinery—we might think that halt the world is idle. Progress has increased the demand for men after all the improvements of labor and labor-saving machinery. So rapidly have new fields and enterprises been developed, under the fostering hands of Art, Science and Invention, that not only has the demand for the individual increased, but ideas have become valuable. "A penny for your thoughts," says the old saw. Thoughts are worth more than pennies now, and ideas suggested by thought are worth millions.

The man who caught the idea of making screws gimlet-pointed controls that commodity in the markets of the world. The man who got the idea of the clothes wringer made money. The idea of making pins, with solid heads, and rolling the points, overturned all England and contributed to that branch of industry, and made New England the pin's point of the world. The ideas of condensed milk, of condensed fruits, of the swinging cigar lighter, packing boxes with wooden bottoms, wooden fruit boxes and stitching machines, led their inventors to the golden beam all men seek.

A penny for your thoughts! For ideas that are shaping the world, no more to be measured by a mercenary standard than the influence of the sun or the blessing of free air.

The eye of the needle at the point—an idea conceived by Elias Howe—made the sewing machine possible. We are all familiar with this household god, which lessens the labor of those we love, and have followed its shuttle, feed, hemmer, tension tucker and stitch, through all improvements, until we behold a machine that will sew with harmony and precision seven hundred stitches a minute; too stupid to make a mistake! But it takes sixteen seconds to thread the needle—a loss of time and labor which could not be afforded. A woman conceived the idea, and exhibits in this building, as her contribution to mechanical progress, a needle that can be threaded in less than a second—threaded without looking at it; threaded in the dark. Two years elapsed from the conception to the practical application of the idea, during which time many experts were consulted. Finally a son of Asia applied the idea and we have the open-eyed needle of Mrs. Suplee, which is to the machine of the future what Howe's was to the machine of the past. The brain of a Caucasian, the muscle of a Mongolian—prototype of what is to be co-workers recording deeds of usefulness, the measure of which will enlarge their spheres.

Time is precious. Seven hundred stitches a minute is not enough. Progress is ameliorating. The Physical effects, the fatigue of the treadle, must be abated. Stevens hears the cry, touches the lever with electricity, and, quicker than thought, twelve hundred stitches a minute respond. Feet unoccupied, treadle dispensed with. This open-eyed needle, driven by the subtle fluid, with its music of twelve hundred stitches a minute, is California's reply to Hood's "Song of the Shirt."

The presence of a star is needed to explain a bend in the earth's orbit. Astronomers' telescopes sweep the heavens until it is found—a star whose unlimited luster shone steadily from the beginning. Undeveloped resources, hidden for centuries are discovered at the call of progress. Mines which have yielded tin for past centuries, now decreasing in quality and quantity, increasing in cost, until increasing de-

mand paid double price, and yet not enough. While this decay was taking place in one part of the globe, to preserve nature's equilibrium, California was discovered, settled, prospected, and the tin mines of San Jacinto laid bare—lodes which yield sixty per cent. ores—a deposit that will change the current of tinwares, and make Temescal what Cornwall has been. This, the first exhibit of tin ever produced in the United States, was crushed, concentrated, smelted, run into pigs and bars, made into sheets, manufactured into tinware—all done with California inventions in the city of San Francisco.

Slate, another article exhibited for the first time as a product of this State, lay undisturbed, though trodden under foot by the ceaseless throng who searched our placers and worked our copper mines.

Inventors, supplying with wonderful success, crushers, quartz mills, amalgamating pans, concentrators, smelting furnaces—separating the precious metals from obdurate matrices, with economy and speed, giving to the world a metallurgy particularly Californian; lead works making shot and pipe; woolen goods second to none; wooden wares supplying every want of this coast; rolling mills ready for the worn rails of a national road; foundries and shops capable of building sewing machines, or launching monitors; engineers bridging rivers, crossing mountains; leather factories furnishing soles to the soleless; native artists reproducing our varied scenery with fidelity; photographers, whose art makes the sun paint their pictures; inventors teeming with thoughts and ideas to meet this developing age; capitalists, open-handed, more liberal than elsewhere;—all these and a thousand more meet our inquiries in the field of manufacture.

One million acres out of forty millions under cultivation, producing 14,080,752 bushels of wheat, 11,605,922 bushels of barley, 1,864,379 bushels of oats, 4,449,835 pounds of butter, 2,110,058 pounds of cheese, 5,229,826 pounds of wool, 1,983,068 bushels of potatoes, 1,791,633 gallons of wine, more than 200,000,000 feet of lumber, 400 pounds of cocoons—three threads of their silk equalling five threads produced elsewhere, and the advantage of greater length—to say nothing of fruits and numerous other sources of wealth—meet our inquiries in the field of agriculture.

The development in mines, mechanics, and agriculture, with only one fortieth of our land under cultivation, of a State not out of its teens, shows the need of “hewers of wood and drawers of water.” We need them, and will absorb them as the parched soil does the October rains; after which, instead of valleys seared, bed-rocks bared, farms desolate, the green grass springing from every nook and corner will be an answering benediction to this priceless gift.

When our rivers, sweeping down their rugged channels, shall be checked by the hand of art; when the virgin soil of our valleys is turned with the plowshare; when our forests yield their treasures; when our hill sides, clustering with grapes that rival those of famed Escal, and yield a vintage purer and better than France or Spain; when the din of occupation resounds from every square mile of our inheritance, we will absorb any immigration that may come here, turn it into channels of trade, teach it to carry our burdens, and make it the element of our strength.

The people who are here, and who are to come, and their children, must be taught. Our public schools supply all that a common education requires; the College of California will supply the classics. The Agricultural College will teach the science and chemistry of farming. There are special callings that must be taught by special Institutions.

It is the mission of the Mechanics' Institute to promote whatever is connected with the mechanic arts. The young inventor must be encouraged; the aspiring mechanic must have his ideas enlarged; the metallurgist must be provided with the laboratory, where practice shall accompany theory; the draughtsman must be supplied with models, and made proficient with lines and shades; the worker must have the condensed progress of the age set before him, the laborer needs the refinement of intellectual exercise, and the community these exhibits of mechanical progress. All these the Institute will supply as the means contributed by a generous public will permit. From rented rooms and borrowed books, from days of adversity, it has grown, and now owns its building with a library of sixteen thousand volumes, reading-room, chess-room, lecture-hall, class of drawing, and polytechnic branch, before which are read papers on different subjects closely allied to mechanics. If pecuniarily successful, we intend to add a course of popular lectures, a branch of metallurgy, a class of chemistry—expanding every year as funds will permit.

Since the 29th of March, 1865, this Institution has steadily increased in power and usefulness. Its present flattering condition is the result of arduous labor and fidelity to the law of progress: recognizing merit free to competition—no restriction save good behavior. Encouraged by the past, with your support in the future, our motto shall be—

No dread of toil have we or ours;
We know our worth, we weigh our powers.
The more we work, the more we win.
Success to trade!
Success to spade!
And the corn that's coming in!
And joy to him who o'er his task
Remembers toil is nature's plan;
Who working, thinks,
And never sinks.
His independence as a MAN.

The Opening Address was listened to attentively and repeatedly applauded, and on its conclusion the Seventh Industrial Exhibition was declared open—and immediately thereafter the fountain played, the whistles blew, and the numerous bells throughout the building rang joyous peals. It has been the custom to announce the time of opening the Exhibition some months in advance and in all cases the rule has been adopted to strictly adhere to the programme.

Exhibitors are always tardy—but we do not believe a postponement would be advisable except under very extraordinary circumstances—The first five days were consumed in arranging the goods on Exhibition—all the available space was occupied, and at the expiration of that time the building presented a very fine appearance.

It may not be amiss, here, as a matter of record to give a description of the general arrangements of the Exhibits in the building which was the same that contained the Exhibition of the previous year, and some statistics connected therewith.

The building proper, was 277 x 188 ft.—the nave being 80 ft. x 277. having a fountain in the center, the basin of which was 42 x 20, and containing one large center jet, and two smaller end ones. The main promenade avenue being 24 ft. wide from the entrance at the east end to the fountain, and having a promenade space of 12 ft. around the fountain, continuing thence twenty feet wide to the west end of nave—leading in to the Art galleries the avenues parallel to this were 7 ft. in width, these at right angles generally 6 ft. except the center avenue, which was 12 ft. wide. In the nave, around the fountain, were exhibited the fruits, flowers and vegetables obtainable at this time of the year (Sept. 14) and which presented a very fine appearance., being a source of wonderment to the many visitors who frequented the Exhibition, and which during the long term of the Exhibition (7 weeks) were kept constantly renewed and fresh under the very creditable superintendence of Mr. E. J. Cummings, who had charge of this department. It was found necessary to surround the whole of this Exhibition with wire netting, so as to prevent damage from handling or loss from speculation, etc.

Various other Exhibits of an attractive character filled the remaining portions of the nave, and from the galleries the *tout ensemble* was both exciting and pleasing to the appreciative mind. There were two galleries running entirely around the center nave, the lower one being about 16 ft. above the floor and fitted up with seats to accommodate about 900 visitors, and the upper one 26 feet above the floor, with seats to accommodate about 600 more. A promenade around the entire center portion of the building, and a number of Booths (each 16 x 12) where fancy goods of all kinds were sold, but for these galleries it would have been impossible to have accommodated the vast throngs which nightly visited the Exhibition.

On either side of the nave were wings 50 feet wide by 277 feet long each. The north wing being occupied by the manufacturing and other machinery, exhibits in metals, the Steam Engines furnishing the power to drive the machinery etc., etc. A line of shafting ran along this wing over head for a distance of 150 feet.

The South wing was occupied by various domestic manufactures of wools, cottons, furniture, etc., and the various Sewing Machine Companies. Crossing the West end of the nave and wings were the Art Galleries—the room for Oil Paintings and Water Colors being 80 feet x 30, Statuary 45 x 30, Photographs 80 x 30. Across the East end of the North wing was a room devoted to fancy goods, and musical instruments 35 by 60, and in same position at the South wing was the Restaurant room 35 by 60, and Kitchen 25 by 12.

The room devoted to the Exhibition of Agricultural implements was situated on the North side of the North wing 60 by 60—and adjoining the boiler house 30 by 60.

On the South side of the South wing the Pullman Palace Car—Orleans—was exhibited in a room especially erected for it, 80 by 26 feet.

The reading and smoking room 60 by 20—was immediately over the entrance—on a level with the lower gallery, and over this, was a space 80 by 36, where ores and minerals were exhibited and being on a level with the upper gallery. The various committee rooms: offices, etc., were in the towers, on the east end of the building, the ticket office being in the center of the vestibule at the east end, there were three openings for selling tickets on each side of the ticket office, and these six openings were often overtaxed for an hour or so, by a throng anxious to purchase tickets of admission.

The total area required for exhibition and promenade room was as follows:—

		Total Area of Floor.	Promenades, Avenues, etc.	Floor Exhibiting Space.
Nave	277x80	22160	14396*	7769
South Wing	277x50	13850	5814	8036
North "	277x50	13850	7274	6576
Agricultural Room	60x60	3600	1600	2000
Boiler House	30x60	1800	1350	450
Car Room	80x26	2080	1480	600
Music Room	35x60	2100	900	1200
Restaurant	35x60	2100	2100	
Art Galleries	205x30	6150	5150	1000
Reading & Smoking Room	60x20	1200	1200	
Committee Room, etc.	48x16	768	768	
Lower Gallery	620x12	7440	7440	
Upper "	554x12	6648	5648	1000
Lower End Gallery	54x60	3240	3240	
Orchestra	24x12	288	288	
Total		87,274	58,643	28,631

* Fountain occupied 840 feet.

It will be seen from the foregoing that out of the 87,274 feet area floor space, but 28,633 feet were required for space in placing goods, the remainder equal to 67 per cent of the whole area, being for avenues, promenade, space for visitors, fountain, etc. In addition to the floor space required for exhibiting goods there was also 1400 linear feet, averaging 12 feet high or 16,800 superficial feet all occupied by Exhibitors.

There were 826 Exhibitors requiring and occupying an average total space of 105 superficial feet each, and there were required 1000-5 feet gas jets in order to give sufficient light to show the goods to advantage during the evening.

The number of Exhibitors were divided as follows;

CLASS 1.....	SEC. 1.....	23.....	
	“ 2.....	17.....	40
CLASS 2.....	“ 1.....	13.....	
	“ 2.....	16.....	29
CLASS 3.....	“		9
“ 4.....	“		35
“ 5.....	SEC. 1.....	20.....	
	“ 2.....	9.....	
	“ 3.....	13.....	42
CLASS 6.....			11
“ 7.....			59
“ 8.....			23
“ 9.....			13
“ 10.....			54
“ 11.....			15
“ 12.....			29
“ 13.....			24
“ 14.....			21
“ 15.....			39
“ 16.....	SEC. 1.....	59.....	
	“ 2.....	10.....	
	“ 3.....	8.....	
	“ 4.....	37.....	114
CLASS 17.....			5
“ 18.....	SEC. 1.....	16.....	
	“ 2.....	30.....	46
CLASS 19.....			73
“ 20.....	SEC. 1.....	58.....	
	“ 2.....	25.....	
	“ 3.....	23.....	106
CLASS 21.....			39
Total Exhibitors.....			826

Although the space apportioned for each Exhibitor seems large, yet when it is remembered, it is necessary to consume so great a portion of the actual space in the building, for the convenience and comfort of the visitors, in order to accommodate them, which is of vital importance to the pecuniary success of the exhibition; and it is also remembered that the number of visitors during one single evening, at one time, has been estimated at 7,500—and the exhibits this year were of a much more attractive character than heretofore—this consumption of space can be accounted for. In fact the public attendance necessarily regulates the size of the Exhibition building—as much as the character of the exhibits and requirements of the exhibi-

tion. In our earlier Exhibitions, the articles exhibited required but a small amount of space, as they had not reached the character or magnitude of the present time. It has been the custom to hold two fairs consecutively, and two years to intervene between these series; and the reason of this, is that your society has never owned a permanent exhibition building, but has built on ground either loaned or leased. The first year usually paying the building and current expenses, and the second year yielding a profit.

We annex statistics relating to the several exhibitions held under the auspices of the Mechanics' Institute, and which are of material interest now at the close of the Seventh Industrial Exhibition.

Date of Fair.	Cost of Building.	Fitting up building.	Running expenses.	Total Outlay.	Total Rec'ts.	Net Gain.	Area of ground covered	No. of Exhibitors.	Avg'e super-fic'l ft. to each exhibr
1857	6 190	2 937	9 037	18 214	21 628	3 414	20 000	650	31
1858	same build'g.	4 110	9 460	13 570	15 542	1 972	25 000	575	43
Total 2 years	6 190	7 097	18 497	31 784	37 170	5 386			
1864	17 616	6 642	14 450	38 738	41 580	2 842	55 000	717	77
1865	1 160	3 355	10 876	15 391	32 133	16 742	61 000	585	104
Total 2 years	18 766	9 997	25 326	54 129	73 713	19 584			
1868	30 633	13 625	20 061	64 319	56 308		75 000	748	111
1869	2 165	5 982	25 233	33 380	65 315		87 000	826	105
Carnival Ball		747	2 791	3 538	5 386				
Total 2 years	32 798	20 354	48 085	101 237	127 009	25 772			
Add to nett gain on Fairs of 1868-69 value of building, say.....						8 000			
Gains—Total for 1868-69.....						33 772			

In addition to the above statement of six Fairs, in 1861, your Society held an Exhibition; it did not prove a success, but entailed a heavy loss, from the fact, at that Fair, exhibitors and members of the Society were admitted without charge; the records of the Society are very reticent in this connection—but the cost of the building was probably about \$11,000.

It is evident from the foregoing that the society would incur considerable pecuniary risk in carrying on these Exhibitions, unless it owned a suitable and permanent structure adapted to the purpose, or protected itself by loans repayable on the contingent success of the Fairs, and which it has done since 1864.

It would seem that a manufacturing center like San Francisco demands the periodical recurrence of these Industrial Exhibitions—and facts bear out in this belief. In every case they have been popular and well attended—and have been carried on by voluntary service on part of the Managers—and without pecuniary aid from the City or State.

The lands on which the buildings have been usually erected were granted without charge to the Society either by the city or private individuals, except in the case of the Fair of 1861 which resulted so disastrously to your Society.

Your society has expended from first to last \$108,000 in erecting and fitting up temporary buildings for Exhibition purposes, 90 per cent of which is absolute loss. If it is the intention to continue to hold fairs under the auspices of the Mechanics' Institute measures should be at once taken to prepare a permanent building in a sufficiently central location so that in the interval between the fairs it can be employed for other purposes, doubtless aid in this direction would be granted by the City or State if proper efforts and representations were made.

The popularity of the present Fair continued during the whole term, owing to the completion of the Pacific Railroads, a great many persons from the Eastern States visited it, and expressed surprise at the extent of our manufactures and the splendor of the display, and each will return home with a better and clearer conception of the value of this States resources.

Opportunely the Grand Lodge of the I. O. of O. F. in the United States, met in San Francisco during the continuance of the Fair; by resolution of the Board

the members were granted constant access during their stay here, as these Gentlemen were sent as delegates from the various States of the Union and would officially report their impressions and experiences. California can congratulate itself upon this fortuitous circumstance.

These fairs to an observer mark distinct eras in the mechanical interest of this State. Manufactures which were a few years since insignificant in extent and capacity unfold to an importance and stability creditable alike to the perseverance and energy of those engaged in the enterprises and to the developing demands of the country at large.

Each Fair demonstrates the success of some new enterprise, and being a source of strength to the State and wealth to the projector induces others to embark on similar undertakings and thus stimulate industry, manufactures, and art, and creates practical Philanthropists by enabling them to give employment to many who would otherwise be idle, and as a consequence suffer or be a drag on the community.

The exhibition continued open forty-one days of which five days were devoted to charitable purposes—during these five days about \$1,800 were distributed among thirteen different charitable associations.

We believe that forty-one days is too long a period for an Exhibition of this kind to remain open, as it not only exhausts the energy and patience of the Managers but becomes wearisome to the exhibitors, (the public attendance however continued good throughout, this fact conclusively proves that the public of San Francisco appreciated it to the fullest extent) we think that twenty-five days would result almost as well pecuniarily if it was known that the Exhibition would close at that time, while the lesser time would give more satisfaction to exhibitors and managers.

The extent of the Exhibition being so great it was necessary to employ a large Police force night and day, and one of the Board of Managers remained in the building all night, while during the day a manager did police duty as officer of the day. Of the paid force there were employed from 8 a. m. to 10 p. m. a Captain of police and eighteen subordinates, who were relieved by a Sergeant and eight watchmen doing duty during the night. To the faithfulness of all these employed we bear testimony, and as further evidence believe this is the only instance of a Fair of such large proportion having been held without a claim for loss from theft being brought before the Board for adjustment.

The Board of Managers desire particularly to express its deep sense of obligation to the U. S. Naval Department at Mare Island and the U. S. Quartermaster Department in San Francisco for the use of the large number of flags during the term of the Exhibition. To Capt. White of U. S. Steamer *Wyanda*, for valuable services of men in arranging flags and decorations. To Capt. Brooks for the use of a set of Marriot's Signals—to Messrs. Church and Clark for display of fireworks on opening night—to the teachers and pupils of the Denman School for their assistance in the opening exercises—to Messrs. G. T. Pracy and H. J. Borth and Co. for free use of Steam Engines which furnished power to drive the machinery during the Fair—to the various Transportation Companies for favors received, and to very many others whose efforts and aid on behalf of the Seventh Industrial Exhibition are acknowledged and appreciated.

For the Financial Statement we beg to submit to you the

TREASURER'S REPORT

of the Receipts and Disbursements of the Seventh Industrial Exhibition of the Mechanics' Institute, 1869.

MECHANICS' INSTITUTE,

SAN FRANCISCO, January 26, 1870.

To the President and Board of Managers of the Seventh Industrial Exhibition, 1869.

GENTLEMEN: I herewith submit to you the following report of the receipts and disbursements on account of the Seventh Industrial Exhibition, 1869. Also a Ticket Report, showing each class and by whom sold.

Yours respectfully,

HENRY L. DAVIS, *Treasurer.*

SEVENTH INDUSTRIAL EXHIBITION.

DAILY RECEIPTS AT THE DOOR.

1869.	Double Season Tickets.	Single Season Tickets.	Children's Season Tickets.	Adult Single Tickets.	Children's Single Tickets.	TOTAL.
Sept. 14...	908	577	103	848	54	\$6 863 00
15...	485	180	57	1 116	113	3 636 75
16...	352	124	66	1 175	108	2 845 50
17...	281	99	35	1 420	117	2 493 75
18...	383	123	41	2 743	533	3 850 25
20 ..	245	90	18	1 888	232	2 524 00
21..	147	44	13	2 201	212	2 040 00
22...	124	46	12	2 617	263	2 150 25
23...	99	29	6	2 677	283	2 000 25
24...	47	26	3	2 036	222	1 391 00
25...	62	27	9	3 325	594	2 215 50
27...	38	18	5	2 135	355	1 407 75
28...	27	9	10	2 192	366	1 364 50
29...	24	4	3	2 750	512	1 639 50
30...	27	5	2	3 088	610	1 849 50
Oct. 1...	18	5	1	3 148	694	1 854 00
2....	7	8	3	2 600	589	1 510 75
4 ...	6	7	1	1 273	143	724 75
5....	5	4		1 323	107	725 25
6....	2	1		1 426	130	758 50
7....	2	3		1 358	126	729 50
8....		1		1 282	142	679 50
9....	1	2		2 001	401	1 111 75
11....	1	2		1 072	95	570 75
12....	1			960	61	500 25
13....		4		1 130	114	605 50
14...		3		1 003	86	532 00
15...				1 007	102	529 00
16...	1			1 775	305	968 75
18 ...				1 085	100	567 50
19 ...				398	33	207 25
20 ...				440	32	228 00
21 ...		1		654	31	337 75
22...				966	86	504 50
23 ...				1 249	161	664 75
25 ...				717	66	375 00
26 ...				731	38	375 00
27 ...				728	44	375 00
28 ...				721	58	375 00
29 ...				697	108	375 50
30 ...				1 730	205	916 25
TOTALS,	3 293	1 442	388	63 685	8 631	\$55 373 25

ACCOUNT OF TICKETS SOLD AND BY WHOM.

NAMES.	DOUBLE SEASON.	SINGLE SEASON.	CHILDRENS SEASON.	ADULT SINGLE.	CHILDREN SINGLE.	AMOUNT
John Pardy, Clerk	3 293	1 442	388	63 685	8 631	\$55 373 25
G. C. Hurlbut	184	61	.....	.....	.....	1 103 00
D. R. Coleman	18	15	.....	.....	.....	135 00
W. W. Hanscom	26	12	.....	.....	.....	166 00
J. Browning	114	8	.....	.....	.....	594 00
A. S. Hallidie	14	10	.....	.....	.....	100 00
J. R. Wilcox	20	7	.....	.....	.....	121 00
John Hancock	25	6	.....	.....	.....	143 00
C. S. Eaton	50	9	.....	.....	.....	277 00
A. Roman & Co.	75	18	.....	.....	.....	429 00
H. H. Bancroft & Co.	33	6	.....	.....	.....	183 00
M. Gray	41	15	.....	.....	.....	250 00
H. J. Holmes	13	4	.....	.....	.....	77 00
H. C. Macy	10	.....	.....	.....	.....	50 00
H. L. Davis	20	15	.....	.....	.....	145 00
N. D. Arnot	8	.....	.....	.....	.....	40 00
Geo. Pardy	2	4	.....	.....	.....	22 00
J. L. Field	8	8	.....	.....	.....	64 00
State Normal School..	.....	.....	22	.....	.....	33 00
W. R. Benjamin, Cur'y	97	17	.....	.....	.....	536 00
L. Curtis, "	30	.....	.....	.....	.....	150 00
H. Bruns "	135	15	.....	.....	.....	720 00
J. C. Innes "	26	10	.....	.....	.....	160 00
	4 242	1 682	410	63 685	8 631	60 871 25

RECAPITULATION OF TICKET ACCOUNT.

Double Season Tickets	4,242 @ \$5 00	\$21,210 00
Single Season Tickets	1,682 @ 3 00	5,046 00
Children's Season Tickets	410 @ 1 50	615 00
Adult Single Tickets	63,685 @ 50	31,842 50
Children's Single Tickets	8,631 @ 25	2,157 75
Total		\$60,871 25

RECEIPTS AND DISBURSEMENTS, SEVENTH INDUSTRIAL FAIR,
MECHANICS' INSTITUTE, 1869.

EXPENDITURES.

FITTING AND DECORATING BUILDING.

Police, Mechanics and Laborers	—1,633 00
MATERIAL —Blyth & Wetherbec, for Lumber	1,172 97
Conroy & O'Connor, for Hardware, etc.	112 24
Davis & Cowell, for Lime	3 00
Wm. C. Pease, for Sash and Hardware	37 25
D. A. McDonald, for Sash	35 00
Hawley & Co., for Hardware	2 50
Miller & Haley, for Skylights and Lumber ..	168 00
A. S. Hallidie & Co., for Wire Cord	16 50
W. Grossmann, for Window-glass	9 00
B. & J. Doe, for Sash and Weights	33 53
A. S. Iredale, for Glue	4 00
John Halt & Son, for Doors and Sash	10 03
H. T. Graves, for Wire Netting	45 97
G. W. Guion, for Hardware	7 12—1,657 11
CARTAGE —Hyde and Chester—Pullman Car in and out	275
Sundry Cartages	115 45— 390 45
MACHINERY —Treadwell & Co, for Belting	58 56
Cousins & Thornhill, Foundation for Engine	46 50
Wm. T. Garrett, Pipes, Flanges & connect's	109 74
H. J. Booth & Co., Frieight on Engine and setting same	258 70
Wm. Blair, Painting Engine, etc.	25 00
Hanscom & Co. Blacksmith & Lathe work etc.	120 57
Marsh, Pilsbury & Co., Belting, Packing etc.	84 16—703 23

Amount Forward, 4383 79

FITTING AND DECORATING BUILDING.—*Continued.*

	Brought forward.....	4,383 79
FURNITURE—	Wm. C. Pease, for Carpet.....	25 00
	C. M. Plum, Window Shades.....	7 38
	R. A. Swain & Co., Crockery, etc.,.....	33 62
	Goodwin & Co., Lounge & Chairs....	38 00
	J. Browning, Sundries.....	19 00
	H. M. Newhall & Co., Chairs.....	130 00
DECORATIONS—	N. P. Cole & Co., use of Chairs.....	48 00—301 00
	Heynemann & Co., for Bunting, Sheeting,	465 43
	David Mulvain, Labor, decorating,.....	40 00
	John W. Cherry, Painting and Lettering..	371 40
	F. G. Edwards, Cloth and Papering Art	
	Gallery.....	321 13
	A. Crawford & Co., Bunting and Repairing	
	Flags.....	17 70
	Thos. Appleby, Boquettes.....	8 00
	Robinson & McDonald, Painting & Sanding	55 50
	Blakeston & Berwick, Repairing Flags.....	40 83
	J. W. Burnham, Carpeting.....	6 13
	H. C. Macy, (cash advanced) paid Sailors for	
	hanging Flags.....	104 25—1,430 42
	Sundries, as per petty cash.....	24 19
		————\$6,139 40

RUNNING EXPENSES

LABOR & C.—	Clerks, Police, Watchmen, Messengers,	
	Engineers, &c. as per Pay Rolls.....	7,539 82
	Canvassers—W. J. Stoddart.....	261 66
	W. T. Herrick	150 00
GAS—	S. F. Gas Co., for Gas.....	3,582 29
WATER—	S. V. Water Works Co., for Water.....	685 00
MUSIC—	M. W. Willis & 12th Infantry Bands.....	3605 00
FUEL—	J. Stanford, for Petroleum.....	227 00
	J. A. White, Coal.....	320 18
	Hoag & Varney, for Wood and Coal	11 50—558 68
PRINTING—	Lceount & Mansur, for Season Tickets....	125 00
	Spaulding & Barto, Circulars and Placards	113 50
	E. Bosqui & Co. Circulars & Compl'y Tickets	46 50
	Taylor & Co., Placards	42 00
	B. F. Sterrett, "Rules"	7 00
	J. Winterburn	6 00
	Francis & Valentine, Posters, Muslin Posters	
	for Cars and Benefit Tickets.....	231 00
	Bacon & Co., Receipt Books.....	19 50
	M. D. Carr & Co., "Labels".....	8 00
	F. Eastman, Circulars, Tickets, Rules, &c.	109 50
	Cubery & Co., Checks.....	22 50
	H. D. Dunn, Sundries....	40 00—820 50
STATIONARY—	Gluyas & Dutton.....	74 94
	Geo. H. Hitchcock.....	20 50—95 44
EXPENSE—	Dietz & Co., for Coal Oil.....	6 25
	A. J. Plato, Rent of Circus Building.....	300 00
	Conroy & O'Connor, Cloths, Hooks	1 00
	Elam & Howes, Brooms, Dusters, Pails, & Co	53 50
	Blake & Robbins, Paper.....	9 00
	J. Landsberger, Wine for "Press"....	12 50
	Hayward & Colman, Lanterns.....	22 50
	Taylor & Cranne, Coal Oil & Lamps	28 00
	E. H. Willis, Com. on Renting Booths....	36 00
	Bouton & Son, Buggy and Express Hire....	180 00
	Whittier, Fuller & Co., for Oil.....	4 20
	Wm. Westgate, Sundries....	27 48
	Crane & Brigham, Chloride of Lime.....	1 43
	Haynes & Lawton, Glassware	20 50
	Will & Finek, Keys.....	1 00
	S. W. Snook, Ticket Boxes and Padlocks....	17 75
	International Hotel, Lodgings and Meals for	
	Infantry Band.....	17 00
	C. Desmond, Caps for Police.....	15 25
	F. H. Page, Street Sprinkling.....	110 50
	J. H. Gilmore, Sundries.....	47 80

Carried forward..... 911 66—17,298 39

RUNNING EXPENSES.—*Continued.*

Brought forward.....	911 66	—17,298 39
H. D. Dunn, Sundries.....	33 00	
Schiller & Schmidt, Sundries.....	114 00	
R. L. Harris, for Services in Pullman Car	8 80	
R. M. McDonald, Chloride of Lime.....	1 00	
C. Railback, Hire of Mammoth Ox.....	90 00	
Expenses on Pullman Car.....	19 70	
Hanseom & Co., for 1 Varney Pan Broken..	75 00	
Occidental Carriage, W. T. Seward's visit..	5 00	
David Stoddart, Rent of Steam Pump.....	25 00	
H. L. David, Electrotype, Stamps, etc.....	8 50	
Teubner & Hoffman, Rent of Show Cases..	71 00	
J. H. Culver, Sundries.....	10 55	
A. Crawford & Co., Signal Halyards.....	4 60	
Nile & Durney, Repairing Wire Screen.....	5 50	
Mrs. Moore, for care of Ladies Toilet.....	109 62	
Geo. Pardy, Sundries	4 50	
R. P. Brydout, Rubber Rule.....	1 00	
D. H. Mosse, Combs & Brushes	2 50	
Cleveland & Everett, Crockery.....	2 75	
Jones & Co., for Mirrors.....	4 60	
McNally & Hawkins, for Sun Burner.....	23 00	
Custom House Brokerage.....	4 90	
George Pardy, Testimonial by the Institute	200 00	—1,736 18
		19,034 57

CONTINGENT EXPENSES.

Discount on Currency.....	\$345 19	
INSURANCE—Pacific Insurance Co.	79 25	
Aetna Insurance Co.	132 25	
Manhattan Insurance Co.	291 25	
Fireman's Fund Insurance Co.....	132 25	
California Insurance Co.....	56 20	
Germania Insurance Co.....	17 20	708 40
ADVERTISING—Allen McBoden, agent for sundry papers	312 00	
L. P. Fisher do do do do...	403 50	
Morning Chronicle.....	134 50	
Morning Call.....	161 50	
The Evangel	14 00	
San Francisco Herald.....	68 00	
L. B. Barbier & Co., Street Car Advertis'g	234 80	
S. F. Bulletin.....	188 50	
Alta California.....	146 50	
Police Gazette.....	22 50	
Oakland Transcript.....	37 50	
The Monitor.....	15 00	
Golden Era.....	22 00	
Examiner.....	54 50	
Figaro.....	42 50	
Alaska Herald.....	10 00	
Thomas Boyce, Newspaper agent...	367 50	
New Age.....	18 00	
Wm. H. Tobey & Co	15 00	
The Hebrew.....	20 00	
The Hebrew Observer	20 00	
The Spirit of the Times.....	38 00	
California Demokrat.....	16 00	
Abend Post.....	12 00	
California Farmer.....	30 00	
San Francisco Times.....	89 00	
The Calumet.....	7 00	
Golden City.....	10 00	
Dewey & Co.....	51 00	
Irish News.....	10 00	—2,620 80
NEWSPAPER SUBSCRIPTIONS—Alta California.....		12 75
Chronicle.....		
Bulletin.....		
Sacramento Union.....		
DIPLOMAS—Britton & Rey, for Lithographing.....	400 00	
F. Seregni, Filling up Diplomas.....	134 00	534 00
PREMIUMS—Charles Vale, Collar for Dies	4 00	
Hubach & Kutz, Gold and Silver Medals.	1171 37	
A. W. Stout, Lettering Medals & Eng. Dies	542 00	
A. H. Loehman & Co., Boxes for Medals..	68 25	—1,785 62 6,006 76

BILLIARD TOURNAMENT.

John Deery, for Services.....	250 00
John W. Tucker & Co., for Prizes.....	150 00—400 00

EXPENSES OF THE CARNIVAL BALL.

Lumber and Preparing and Fitting up Building.....	747 19
Stationery.....	7 30
Advertising.....	467 25
Printing.....	342 20
Clerks.....	188 75
Prof. A. A. Sanders, as Floor Manager.....	100 00
Buggy Hire.....	8 00
Cartage.....	15 00
Nails and Tacks.....	14 75
Musie.....	375 00
Floor Cloth, etc.....	478 08
Badges.....	56 25
Carnival Sign.....	18 50
Use of Chairs.....	80 00
Gas.....	174 25
Decorations.....	85 00
J. W. Tucker, Prizes.....	300 00
Sundries.....	81 00—
	3,538 52

R E C A P I T U L A T I O N .

RECEIPTS.

Tickets sold at the door.....	\$55,373.25	
“ “ by individuals.....	5,498	
		\$60,871.25
Or Privileges sold.....	3,579.50	
Rent of Booths.....	450	
“ “ Circus Building.....	75	
Sundry Gas bills.....	339	
Carnival Ball.....	5,386.30	9,829.80
Total Receipts.....		70,701.05

DISBURSEMENTS.

Fitting and Decorating Building.....	\$ 6,139.40	
Running Expenses 41 days.....	19,034.57	
Contingent Expenses.....	6,406.76	
Carnival Ball.....	3,538.52	\$35,119.25
Net gain on 7th Fair.....		35,581.80
Paid on acct. 6th Fair.....		8,010.87
Balance.....		27,570.93
Unadjusted account pending—and not paid.....		1,799.00
Net gain on the two Fairs.....		25,771.93

From the foregoing report it will be seen that the operation of the Fair nets the Society the sum of twenty-five thousand seven hundred and twenty-two dollars. After paying all known claims against the Pavilion Building, the balance will be transferred to the Trustees of the Mechanics' Institute, for the reduction of the mortgaged debt, and benefit of the Association, in addition to which are assets being the property in the name of the Board of Managers, which may be valued at \$8,000, and said property consisting of the Pavilion Building, on Union Square, and appurtenances, will increase the receipts from the Industrial Exhibition that sum.

The following is a summary of the premiums awarded by the various committees of awards.

LIST OF AWARDS.

Institute Medal.

Pacific Rolling Mill Co.

Inventor's Medal.

A. G. Waterhouse, Rotary Mechanical Power.

Gold Medals.

Kindelberger & Arnold, blind shade tenoning machine.

J. D. Arthur & Son, bent-axle gang plow.

California Powder Works, blasting, rifle and hunting powder.
 A. S. Hallidie, improved rigid suspension bridge.
 J. S. Phillips, portable assaying machine.
 San Francisco and Pacific Lead Pipe and Shot Works, pig lead, leadpipe, drop shot, etc.
 Jonathan Kittredge, California safes.
 Pacific Saw Manufacturing Co., saws, pruning knives, reaping machine sections, etc.
 Elam & Howes, wooden ware.
 Pacific Glass Works, assorted glassware.
 San Jacinto Tin Co., samples of tin ore, pig tin, block tin, and tin ware.
 Pioneer Paper Mills, colored and other papers.
 Black & Miller, hacks and top buggies.
 Main and Winchester, display of harness.
 Goodwin & Co., best average general display of furniture.
 Strahle & Hughes, laurel palace and California woods.
 Toby Rosenthal, oil paintings—Exile's Return and Joys and Sorrows of Spring.
 P. Mezzarra, artistic merit in statuary of California manufacture.
 George A. Brush, imitation laurel, walnut and oak.
 Jacob Zech, square piano.
 Capital Woolen Mills, blankets and flannels.
 J. R. Nickerson, best display of apples.
 Thomas Varney, amalgamating pan.

Silver Medals.

G. T. Pracy, steam engine governor.
 Berry & Place, Blake's steam pump.
 J. T. Ford, hook and eye machine.
 Berry & Place, planing and matching machine.
 C. F. Travis, French burr mill stones.
 J. W. Sutton, rotation dynamometer.
 Hawley & Co., Marsh's harvester.
 George A. Taylor, steam quartz battery.
 T. Locher, working model of steam plow.
 San Francisco Cordage Co., samples of manilla cordage.
 A. S. Hallidie & Co., wire rope and cord.
 Liddell & Keading, California manufactured breech and muzzle loading shot guns and telescopic target rifles.
 Asphaltolin Pipe Co., asphaltolin pipe.
 E. N. Robinson, specimens of roofing, slate and flagging.
 John Roach, transit, theodolite and leveling instruments.
 V. S. W. Parkhurst, Howe's standard scales.
 Folleau & Mabon, Surgical appliances, artificial legs and trusses.
 National Watch Co., Elgin watches and movements.
 Phelps Brothers, California manufactured bolts, nuts, screws, etc.
 N. W. Spaulding, circular saws with Spaulding's patent teeth.
 Brittan, Holbrook & Co., japanned and copper ware.
 H. T. Graves & Co., wire goods.
 W. T. Garratt, brass work.
 M. Fulda & Son, mammoth wine cask.
 Korbell & Brothers, California veneers.
 John Mallon, specimens of glass cutting.
 M. Clark & Son, California stoneware.
 Whittier & Fuller, mirror silvering.
 Pacific Oil and Lead Works, paints and oils.
 Mrs. C. Cook, landscape and device work in hair.
 Pacific Plate Works, gold and silver plating.
 Saratoga Paper Mills, straw wrapping paper.
 D. Hicks & Co., book binding.
 Kimball & Co., display of California carriages.
 O. F. Willey, light open buggy and turn down phaeton.
 Larkins & Co., no top buggy and Concord spring buggy.
 Stone & Hayden, display of harness and team collars.
 Manasse & Baker, display of tanned leather and skins.
 P. Kelly, boots and shoes.
 M. M. Cook, & Son, leather belting and hose.
 N. P. Cole & Co., California manufactured cabinet work.
 Dana & Codington, California manufactured curled hair.
 Samuel M. Brookes, still life paintings, 77 and 78.
 G. J. Denny, marine oil painting.
 F. Seregni, superior penmanship and drawing.
 James Lick, ornamental frames, clock case and gilded glass plates.
 John W. Cherry, gold letters on glass.
 Noble & Gallagher, embossed, enameled and ornamental gilding on glass.
 Miss Marion Blanchard, wax work.
 Jacob Zech, upright piano forte.

Kohler, Chase & Co., Mason & Hamlin's cabinet reed organs.
 Eureka Manufactory, wadding, batting and comforters.
 Oregon City Woolen Mills, samples of cassimeres.
 K. Meussdorfer, hats.
 H. Liebes, furs.
 Ed. Muller, silk culture.
 L. A. Gould, apples, pears and grapes.
 D. L. Perkins, 146 varieties of seeds. (native.)
 D. Ghirardelli & Co., chocolate, broma and cocoa.
 Brignardello, Michaevello & Co., farina, Italian paste and vermicelli.
 Boston Cracker Co., crackers, cakes, etc.
 F. Seibert, red wine and brandy.
 H. G. Suplee, *easy* threading needle.

Diplomas and Certificates of Merit.

CLASS I.—SECTION 1.

H. J. Booth & Co., horizontal steam engine, diploma.
 J. T. Ford, miniature steam engine, cer.
 G. T. Pracy, 8-inch engine, with fittings, dip.
 H. B. Martin, double acting oscillating steam engine, dip.
 Micheal Lawton, model of steam engine, dip.
 T. W. Burns, Taylor oil burner, dip.
 J. W. Bowker, spark catcher and smoke killer, dip.
 Edwin Squires, 1-horse power steam engine, dip.
 David Stoddart, Pickering governors, dip.
 Fuller & Co., Johnson's equalizing steam heater, dip.
 J. L. Constable, patent steam packing and piston, cer.
 Treadwell & Co., Hoadley's portable steam engine, dip.

SECTION 2.

A. Meyers, Leffel American double turbine, dip.
 Fuller & Co., Bodine Jonval wheel, cer.
 D. Stoddart, Cameron special steam pump, cer.
 D. Stoddart, Sewell & Cameron's fly-wheel pump, cer.
 W. D. Hooker, hand pump, cer.
 W. H. T. Clark, hand pump, cer.
 Hanscom & Co., Hayes' steam pump, dip.
 Baker & Hamilton, Earle steam pump, cer.
 V. Cushing, Excelsior hand pump, dip.

CLASS II.—SECTION 1.

Kindleberger & Arnold, double acting blind wiring machine, dip.
 Otis Jackson, endless or band saw, dip.
 Pilkington & Lane, Excelsior wood saw, dip.
 Geo. A. Day, jig belt saw, dip.
 Geo. T. Pracy, upright drill, cer.
 T. D. Young, engine lathe, cer.
 Wm. Sellers, (Philadelphia), bolt cutting machine, dip.

SECTION 2.

J. W. Quick, quartz smutter and shaker screens, dip.
 A. S. Hallidie, improved grip pulley, dip.
 R. P. Rider model of brick machine, dip.
 A. Williams, model of brick machine, cer.
 Atwood & Bodwell, Excelsior wind mills, dip.

CLASS III.

Hanscom & Co., foundry and cupola in operation, dip.
 W. H. Hepburn, amalgamating pan, dip.
 Thompson Bros., Patterson's patent forge, dip.
 Porter & Collins, quartz crusher and duster, cer.

CLASS IV.

Treadwell & Co., Russell's threshing machino, dip.
 H. G. Pratt & Co., Eagle hay press, dip.
 L. L. Sawyer, Flinlayson's seed sower, dip.
 Baker & Hamilton, sweepstake horse fork, dip.
 Hunter & Weister, grain separator, cer.
 M. C. Hawley & Co., Buckeye mower and reaper, with self-raking attachment, cer.
 M. C. Hawley & Co., Burdick's national hay cutter, cer.
 Ives Scoville, side hill plow, cer.

CLASS V.—SECTION 1.

Lloyd & Stewart, improved anchor, dip.
 I. E. Thayer, model of pilot boat, cer.
 Murdock & Campbell, model of pilot boat, dip.
 James Houseman, model of yatch pilot boat, dip.
 John E. Kennedy, model of propellor screw, dip.
 B. Reiley, set of hinged row locks, dip.
 O. T. Stacy, steering apparatus, dip.
 L. D. Herrick, metallic life boat, dip.

SECTION 2.

A. J. Plate, hunting rifles and shot guns, dip.
 Wm. Rudolph, improved gun lock, dip.
 A. F. Potter, breech loading gun and projectiles, dip.
 Church & Clark, fireworks, dip.
 W. T. Garratt, two brass 2-pound cannon, cer.
 Cranmer & Holden, revolving battery gun, dip.

SECTION 3.

P. Portois, earthquake proof chimney, dip.
 Pacific Wood Preserving Co., specimens of prepared wood, dip.
 W. Lynch, Lynch's improved reflector, dip.
 M. Clark & Son, sewer and water pipe, cer.
 B. H. Freeman, stair work, dip.

CLASS VI.

Lundborg & Marwedel, case of telegraph instruments, dip.
 California Business University, telegraph instruments cer.
 Fairbanks & Hutchinson, platform and counter scales, dip.
 A. E. H. Braun, trusses, dip.
 Mrs. M. A. Suydam, patent cornea restorer, dip.

CLASS VII.

J. Perham, stove-pipe shelf, cer.
 George Rubens, saucepan cover, dip.
 John McLeod, combined latch and lock, cer.
 John Nestor, weather-boarding tool, dip.
 F. T. Houghton, petroleum stoves, dip.
 Charles Otto & Co., case of brass and plated hardware, dip.
 Henry Axtell, two pairs wire cutters, dip.
 A. L. Stenson, Westlake patent lanterns, dip.
 American Saw Company, samples of perforated saws and moveable teeth, dip.
 C. H. Foster, substitute for brass hinges, dip.
 J. B. Owens, coal oil stoves and lamps, cer.
 Standard Soap Co., submerged coffee pot, cer.
 Matthew Cooke, giant wedges, dip.
 Weed & Co., brass goods, dip.
 M. Price, cutlery, dip.
 Joshua Gray, samples broom, solder, piano covering and hook and eye wire, dip.
 F. B. Lamb, stove-handle and household tool, cer.
 Kindelberger & Arnold, reversible loose joint butts, cer.
 Carl Hinz, moulding tools, dip.
 Garvey & Kimball, steamboat and house bells, dip.
 John Bohn, stoves and fixtures, dip.
 L. D. Herrick, Hendrickson's chimney top and Horrick's sprinkler, cer.
 Root & Nye, gas fixtures, dip.
 Cassin & Proctor, patent funnel, dip.
 Will & Finck, hotel annunciators, dip.
 W. T. Garratt, California made bells, dip.
 J. H. Culver, improved calipers, dip.
 K. Vail, iron planes, dip.
 C. O. Bagley, window blind fastener, dip.
 Lloyd & Tetlow, patent sewing needle, dip.
 Tay, Brooks & Backus, japanned ware, dip.
 Wm. H. Woods, steam cylinder cocks, dip.

CLASS VIII.

Thomas J. Hall, willow ware, dip.
 J. E. Thayer, stick of laurel timber, dip.
 Figer Brothers, brushes, dip.
 S. P. Taylor & Co., brooms, dip.
 E. A. Stockton, washing machine, dip.
 D. G. Lewis, mangle and wringer, dip.
 Jacob Whitney, washing machine, cer.
 F. W. Arnold, casks, barrels and kegs, dip.
 Miss M. P. Carpenter, fluting machine, dip.
 McDonald & Withers, adjustable window awning, dip.

CLASS IX.

S. & G. Gump, mirrors, dip.
 A. S. Hallidie, Morgan's plumbago crucible, dip.
 Thomas O'Neil, samples of cut glass, dip.
 Haynes & Lawton, chinaware, dip.
 R. A. Swain & Co., fancy goods and cut glass, dip.
 Albion Pottery, pottery ware, dip.
 Son & Briggs, meerschaum pipes, cer.

CLASS X.

J. J. Knowlton, ink, dip.
 S. Pillsbury & Co., Mme. Barclear's washing fluid, dip.
 S. Pillsbury & Co., Parepa Rosa's toilet companion, cer.
 S. Pillsbury & Co., liquid laundry blue, cer.
 Cordillera Silver Mining Co., rare and costly minerals, cer.
 G. P. Rose, collection of minerals, cer.
 George Pfeiffer, model cabinet, cer.
 Hugo Mahnz, aniline dyes, dip.
 Pacific Match Factory, block matches, cer.
 M. Lebetard, Russian Inflammable balls, cer.
 George Heuter, cement, varnishes, sealing wax, etc., dip.
 Dana & Codrington, oil and glue, dip.
 Hucks & Lambert, axle grease, dip.
 Standard Soap Co., variety of soaps, dip.
 A. Golsh, California safety matches, dip.
 Crane & Brigham, sulphate of copper crystals, dip.
 Vichy Water Co., vichy water dip.
 Napa Soda Co., Napa soda, cer.
 Pacific Congress Water Co., Pacific congress water, cer.
 J. F. Fuggazzi, perfumery, cer.
 Biggs & Gardner, display of ores, dip.

CLASS XI.

J. C. Hilton, stencil dies and steel figures, dip.
 San Francisco Plating Works, new and old ware plating, dip.
 Geo. T. Casebolt, plated carriage lamps and trimmings, dip.
 John J. Joiner, metallic signs and engravings on metal, dip.
 George M. Wood & Co., door plates and seals, dip.
 F. M. Trueworthy, stencil plates and impressions, dip.
 Dr. D. S. Hutchinson, specimens of mechanical dentistry, dip.
 Geo. W. Patch, samples of stencil work, cer.

CLASS XII.

Cubery & Co., specimens of printing, dip.
 A. W. Stott, card engraving, dip.
 Geo. B. Hitchcock, letter press and display of books.
 H. H. Bancroft & Co., law blanks, gold pens, etc., dip.
 Paul Linforth, Russell's Enreka combination printing case, dip.
 A. L. Stenson, patent check cutter, dip.
 Burgess & Stratton, patent music folios and music files, cer.
 Henry White, travelers' scrap book, cer.

CLASS XIII.

Lawton & Co., milk wagon, dip.
 Paul Frievofer, brewery wagon, dip.
 George R. Cramer, dumping wagon, cer.
 Wm. M. Betts, carriage springs, dip.
 A. W. Burnham, 2 buggy woods, dip.
 S. L. Pereria, railroad springs, dip.
 Wm. H. Hughes, tire upsetter, dip.

CLASS XIV.

Mrs. Whiting, portable wheel cap, dip.
 Edward Galpen & Co., Saratoga trunks, dip.
 H. Behrendt & Co., sole leather trunks, dip.
 L. Price, boots and shoes, dip.
 Broderick & Kast, boots and shoes, cer.
 Malone & McMahon, tanned skins, cer.
 Lawless Brothers, ladies' saddle, dip.
 B. Falk, leather frames, baskets, etc., cer.
 Mrs. A. D. Baker, leather bracelets, etc., dip.
 Mr. Barr, (Sacramento) California saddle trees, dip.

CLASS XV.

Mrs. H. E. Morton, reception chair, cer.
 Thornton Westley, sofa bed and bed bottom, dip.
 Strahle & Hughes, billiard table, dip.
 Blyth & Wetherbee, pyrographic wood, dip.
 A. Litzins, California easy chair, dip.
 Geo. O. Whitney & Co., display of imported furniture, dip.
 Lazzaro Castagnino, two specimen tables, marquetric work, dip.
 L. L. Sawyer, California improved window shade, cer.
 Jones & Wooll, gilt mantle mirror frames, dip.
 Derome & Stout, enclosed bed, dip.
 A. J. Forbes, pet of boudoir, cer.
 Jacob Schreiber, imported garden furniture and store stools, cer.

CLASS XVI.—SECTION 1.

Samuel Walker, portraits, dip.
 John Wilson, landscapes, dip.
 Robert E. Ogelby, crayon sketches, 56 & 57, cer.
 Geo. H. Burgess, pencil drawings, cer.
 Norton Bush tropical sketches and bay of Panama, cer.

SECTION 2.

California Buisness University, practical commercial penmanship, dip.
 Mallon & Boyle, glass staining, dip.
 Jas. E. Wolfe, architectural drawings, dip.
 Mrs. H. S. Hutchinson, medley picture, dip.
 Joseph S. Mitchell, marble picture frame, dip.

SECTION 3.

Sweet & Gadsby, imitation of marble and wood, dip.
 James W. Lunny, lettering on glass, cer.

SECTION 4.

Mrs. M. E. Doherty, hair work, dip.
 Mrs. Swanton, moss work, dip.
 D. Dennechad, artificial flowers, dip.
 Mrs. Richard Brown, skeleton leaves, dip.
 Mrs. May, boquet of skeleton leaves, cer.
 Mrs. Bennet, wax work, cer.
 Mrs. S. A. Sanderson, moss work, cer.
 Mrs. A. DeYoung, pen picture, cer.
 Mrs. J. J. Daggett, shell frame, cer.
 Miss Winifred White, picture in sea moss, cer.
 Miss Emma Blanche, wax cross and wreath, dip.
 Miss Mary Pennic, wreath of Cal. poison oak, cer.
 Mrs. J. Widie, beaded pin cushion, cer.
 Mrs. F. B. Medena, 2 shell wreaths, cer.
 Miss Kate Mitchell, picture and frame made from Cal. leaves and flowers, cer.
 Miss Nellie Welty, 4 pieces bead work, cer.
 Mrs. M. J. Coffin, wreath of sea moss from Alaska, cer.
 H. Kahn, Artificial flowers, cer.
 Mrs. V. E. Howard, boquet of artificial flowers made from silk cocoons, cer.

CLASS XVII

F. B. Schoenstein, orchestrion machine, dip.
 A. A. Rosenberg, California publication of music, dip.
 M. W. Willis, case of brass band instruments, Louis Schreiber's patent, div.

CLASS XVIII.—SECTION 1.

A. Hahne & Co., Pioneer factory, wadding, batting and comforters, dip.
 Alexander Mackay, rag carpeting, dip.
 W. D. Perine Sacramento, samples of California flax in plant and fiber, dip.
 Main & Winchester, robes and blankets, cer.
 Geo. Macy, rag mats, cer.

SECTION 2.

S. Figel, boys' clothing, dip.
 Joseph Figel, boys clothing, cer.
 Norcross & Co., regalia and embroidery, dip.
 M. Ettinger, fringes trimmings and cords, dip.
 H. R. Cabery, Chicago, Masonic jewels and regalia, dip.
 Pacific Pioneer Paper Collar Co., paper collars and cuffs, dip.
 Pacific Straw Works, straw goods, dip.
 R. M. Adams, hats and caps, dip.
 Pacific Necktie Factory, cer.

CLASS XIX.

Miss Fanny P. Chandler, knit bedspread, dip.
 Mrs. S. E. Hollister, knit bedspread, cer.
 Mrs. Schrinor, crotchet bedspread, dip.
 Mrs. H. Robson, crotchet bedspread, cer.
 Sarah E. Hoadley, bedquilt, dip.
 Miss Lizzie Martin, Joseph's Coat of Many Colors, bedquilt, cer.
 A. H. Suplee, Afghan, dip.
 M. Peterson, afghan for carriages, cer.
 Mariah Sutherland, tapestry picture, "Crowning of Queen Esther," dip.
 L. H. Bailey, worsted pictures, cer.
 Mrs. A. Van Dusen, down capes and trimmings, dip.
 Mrs. E. E. Caswell, case of millinery, dip.
 Mme. Goldberg, case of millinery, cer.
 Mrs. J. A. Mayhew, dressmaking, dip.
 Women's Co-operative Union, needlework, dip.
 Ladies' Depository, cambric embroidery, dip.
 Mrs. R. W. Bessy, silk and flannel embroidery, dip.
 Mrs. Dannenberg, infants' apparel, dip.
 Mme. Prousergue, children's underwear, cer.
 Mrs. James Sullivan, silk and flannel embroidery, cer.
 Mrs. Mary E. McClellan, tatted tidy, dip.
 Miss Viola Lilienfield, infant robe trimmed with tatting, cer.
 Mrs. C. Latham, chenille shawl, dip.
 Mrs. F. B. Medena, worsted wreath, dip.
 F. Entz, perforated stamping, dip.
 Mrs. Regensberger, embroidery, new kind, dip.
 Mrs. J. G. Klumpke, embroidered rug, dip.
 Mrs. A. S. Magendi, sofa pillow, cer.
 Mrs. W. H. Parker, crape and chenille cushion, cer.
 Miss R. H. Chandler, needlework, "English Coat of Arms," dip.
 Mrs. A. H. Ruggles, neckties, dip.
 Mrs. W. Scott, embroidery in chenille and velvet, cer.
 H. Friedlander & Co., case of underwear, cer.

CLASS XX.—SECTION 1.

Thomas Appleby, cut flowers, dip.
 B. F. Headen, (Santa Clara), fruit, dip.
 J. Strentzel, (Martinez), foreign grapes, dip.
 J. Greenall, (Sacramento), apples, dip.
 J. W. Patterson, (San Jose), plums, dip.
 A. P. Smith, (San Diego), mulberry trees two years old, dip.
 D. F. Adams, (San Jose), apples, dip.
 George Smith, (Sacramento River), largest sweet potatoes, dip.
 R. B. Woodward, foreign plants, dip.
 G. W. Tarlton (San Jose), second best apples and squashes, cer.
 B. S. Thompson (Napa), best exhibit of grapes, dip.
 E. Andrews (Sonoma), exhibit of Duchess d'Angouleme, pears, dip.
 George West (Stockton), exhibit of grapes, cer.
 R. Kercherall (Sacramento River), pound pears, cer.
 E. H. Nordgren (Saratoga, Santa Clara); sample of apples, cer.
 R. Mowre (Suscol), large gloria mundi apples, cer.
 S. Hawk, Sacramento, specimen of fruits, cer.
 J. Runyon, Sacramento River, specimens of apples, cer.
 J. W. Gale, Sacramento, specimens of fruit, cer.
 R. B. Woodward, hothouse foreign grapes, dip.
 M. Ryan, Sonoma, orange and lemon trees bearing fruit, dip.
 B. F. Headen, Santa Clara, unfermented grape juice, dip.
 Robert Williamson, Sacramento river, white potatoes, dip.
 J. O. Brown, large sweet potatoes, dip.
 S. Huff, San Leandro, mammoth squashes, cer.
 M. Hosenberg, Sacramento, California almonds, (large) dip.
 M. Hosenberg, Mediterranean squashes, dip.
 Boggs Brothers, Sherman Island, citrons and water melons, dip.
 E. A. Upton, dahlies and plants, dip.
 W. S. Jacks, Napa Italian chestnuts, dip.
 R. C. Perkins, Japanese tea plant dip.
 H. F. Hutchinson, ramie plant and nore, dip.
 James B. Welty, Yolo County, samples of mulberry trees two years old, cer.
 Mrs. Hildenhagen, Russian Cigarritos, dip.

SECTION 2.

D. R. Prevost, best display of wine vinegar, dip.
 Boston Cracker Bakery, crackers and bread, dip.
 California Sugar Refinery, sugars and syrups, dip.

H. C. Hudson & Co., mustard and spices, dip.
 H. J. Clayton, salad dressing and chicken sauce, dip.
 Marden & Myrick, coffee, dip.
 Mrs. E. D. Hale, Stockton, assorted jellies, dip.
 J. S. Harbison, Sacramento, honey dip.
 Dr. J. Stentzel, Martinez, wine vinegar, dip.
 Henry Lake, salad oil, dip.
 Geo. A. Brach, sample of decorated confectionery, dip.
 California Pickle Factory, pickles and sauces, dip.
 Oakley & Co., cracked wheat, hominy, farina, oatmeal, etc. dip.
 J. C. Merrill & Co., Sandwich Island Sugar, dip.

SECTION 3.

C. J. Leiding, Sonoma red wine (Zinfandello), dip.
 A. Finke, sparkling California wine, dip.
 F. & P. J. Cassin, Wild Grape Root Bitters, dip.
 W. H. Rhea & Co., old copper distilled whisky, dip.
 I. Landsberger, sparkling California wine, cer.
 I. Landsberger, second class white wine, cer.
 McMillan & Kester, syrups, essences and cordials, dip.
 Lake Vineyard Co., second class red wine, cer.
 F. & P. J. Cassin, grape brandy bitters, cer.
 Lyons & Co., ales and porter, bottled by J. D. Robertson, cer.
 M. Deschamps, third class California brandy.
 L. Gros & Co., I X L Bitters, cer.
 M. Keefer & Hollander, New Orleans, Malakoff bitters, dip.
 A Bona, whiskey punch, cer.
 F. Putzman, Prussian bitters,

CLASS XXI.

A. Weyer, silk and woolen cleaning, dip.
 Hubert Burgess, national system of drawing, dip.
 Wan Yune Lung Kee, display of teas, Chinese flowers and fancy articles, dip.
 E. F. Lorquin, stuffed birds, animals, etc., dip.
 J. D. Barr, umbrellas and parasols, dip.
 Lyons Bros., parasols, cer.
 John F. Snow, specimens of feather and glove cleaning, dip.
 V. S. W. Parkhurst, money drawer and combination lock, dip.
 Kittredge & Leavitt, safe lock, dip.
 H. True & Co., burglar alarm telegraph, dip.
 Fairbanks & Hutchinson, money drawer, cer.

All of which is respectfully submitted—February 4, 1870.

A. S. HALLIDIE, *President*.
 J. R. WILCOX,
 HENRY L. DAVIS,
 J. H. GILMORE,
 GEO. PARDY,
 D. R. COLEMAN,
 WM. C. PEASE,
 HENRY C. MACY,
 H. P. HERRICK,
 JACOB BROWNING,
 W. W. HANSCOM,
 JOHN HANCOCK.

Board of
 Managers.

Reports of Examining Committees

AND

AWARDS TO THE VARIOUS EXHIBITORS.

INSTITUTE MEDAL.

A gold medal known as the Institute Medal, valued at two hundred dollars, will be awarded to that invention, industrial product or manufacture, which in the opinion of the Judges shall be of the greatest benefit and value to the people of California.

Report of Committee on the Institute Medal.

SAN FRANCISCO, October 27th, 1869.

[A. S. Hallidie, Esq., President of the Mechanics' Institute.]

Dear Sir: The Committee appointed by the Managers of the Seventh Industrial Exhibition, for the award of the Institute Gold Medal, herewith present the report of their proceedings.

The task of the Committee was to award this medal to that invention, industrial product or manufacture which, in the opinion of the Judges, will be the greatest benefit and value to the people of California. Their duty, therefore, seemed to cover the entire representation of useful inventions and products displayed in the exhibition, whose manifestations of the enterprise, ingenuity and industry of our people could not fail to impress the Committee with an onerous sense of their work in undertaking to decide where the superiority of claim to the medal was to be found.

Desiring to be prepared in the strongest manner for their final decision by possessing the fullest information, the Committee advised a public notice calling for written statements from each exhibitor, as to the special grounds on which they might base their claim to the award. Not limiting, however, their investigations to such claims as were preferred by response to this notice. The Committee fully considered the reports of other Committees of the Institute making awards of various premiums, in order that these observations might extend over the whole field of the exhibition.

In answer to the notice, statements were received from twenty-one exhibitors, several of whose replies being deemed too meagre for a full understanding of their subject, a further request was made for additional information. To other exhibitors whose contributions seemed of a high character, but who delayed in responding to the notice, especial request for statements were sent.

With the whole number of competitors in view, the Committee proceeded, first, to the selection of those of superior claims, leaving out all others, among whom appeared several whose inventions, though of seeming practicability and high utility, had been developed only to a stage of partial success. This selection narrowed the field of award to four candidates, who in the judgment of the Committee, seemed to be entitled above others to the prize, and whose respective claims characterized by the conditions which constitute the proper grounds of award, appeared to be almost equally balanced. Here, however, the final selection was required to be made; and it affords the Committee much satisfaction to be able to state that it was the result of a tacit conviction of each member, spontaneously and unanimously expressed on calling for the nomination of their choice.

The committee therefore unanimously adjudge the award of the Institute Gold Medal to the Pacific Rolling Mill Company of San Francisco, as representing an industrial establishment whose operations and productions are of the greatest benefit and value to the people of California.

Of the prime necessity of the production of iron in suitable forms for the development and progress of civilization, and its vast influence therein, it is necessary here to speak—universal as it is in other parts of the world, the Pacific Coast has heretofore depended solely upon its importation, and only within the last year and through the noble enterprise of this Company have we experienced its successful domestic manufacture.

In conclusion, the Committee would express their deep sense of other claims for the Institute Medal, especially of the Lead Smelting and Manufacturing works of San Francisco, of the California Powder Works, of the Pacific Glass Works, and of others approaching in importance to these large, useful and enterprising establishments.

Very respectfully yours,

CALVIN BROWN,
ALFRED RIX,
JOSEPH BRITTON,
A. J. MOULDER.

In accordance with the foregoing report the INSTITUTE MEDAL was awarded to the PACIFIC ROLLING MILLS COMPANY of SAN FRANCISCO.

THE INVENTOR'S MEDAL.

A special committee was appointed to examine into and report upon the most worthy invention which had been perfected and exhibited since the expiration of time of entry at the last Industrial Exhibition. A Gold Medal, called the Inventor Medal, was offered by the Board of Managers as the prize to be awarded to that invention considered by the Special Committee the most worthy and of greater practical benefit to the people here. In accordance with the report submitted and herewith appended.

The INVENTOR'S MEDAL was awarded to A. G. WATERHOUSE for a *Rotary Mechanical Power*.

Report of Special Committee on Inventor's Medal.

San Francisco, Oct. 25th, 1869.

To the President and Board of Managers of the Seventh Industrial Fair of the Mechanics' Institute of San Francisco.

Gentlemen,—The undersigned, named by you as a Special Committee, to award to the most meritorious invention on exhibition at the Fair, the Inventor's Medal of the Institute, the same being confined to inventions made or perfected since the last Fair in 1868, beg leave to report that they have examined all the articles submitted for competition for the Medal, and find numerous inventions of great merit and novelty, either of which could command attention from mechanics, and others; but among them all we find one of novelty, universal application in mechanics, simplicity, and displaying so much inventive genius, as to warrant us in recommending that the Inventors' Gold Medal be awarded to the inventor, A. G. WATERHOUSE.

The invention is called a *Rotary Mechanical Power* and may be briefly described as a circulating cog-wheel or gear, propelled by a revolving eccentric shaft in the centre, and circulating within a wheel geared inside its periphery and of somewhat larger diameter than the circulating cog-wheel, conveying a successive power to and rotating the exterior wheel, at any ratio of speed and comparative power from one to two, four or five, to one thousand or more, there being no limit to the ratio, and being regulated only by the throw of the eccentric and the number of teeth in the cog and exterior wheels.

We know of no mechanical contrivance which will accomplish the same results with so much simplicity, certainty, small amount of friction, and in so compact a form, and of such universal and important application in mechanics as this invention. The important application of an increase of speed can be obtained by rotating the exterior wheel and substituting a crank for the eccentric, within the limits of the invention. For Ships Windlasses, Capstans, Winches, Derricks, Cranes, and similar machines it must come into universal use and the facility with which one degree, or ratio of power exerted, for the power applied can be changed while in the act of hoisting, will commend it particularly for Ships use in Capstans, Winches, and Windlasses.

A feature of the application to Capstans, is that the Capstan can be made to act without a pawl motion, in fact pawling itself and preventing any reverse motion, when the applied power at the Capstan bar is removed or ceases to act.

No. 825—Class 1, Section 2.—The invention of HORACE B. MARTIN being a novel application of a Circular Valve operated by the oscillating motion of a steam cylinder, cylinder of a pump or hydraulic engine, deserves especial mention for its simplicity and great mechanical ingenuity and adaptation to all oscillating engines, pumps for fluids, or air, or as a hydraulic meter.

If in order, we would recommend an award of a silver medal to Mr. Martin for this valve motion, being of general application.

No. 2—Class 2.—The very ingenious invention of I. T. FORD of a Hook and Eye Machine calls for especial commendation at our hands. The machine displays great mechanical ingenuity and perfection in its working parts, and is creditable alike to the inventive genius and mechanical knowledge and dexterity of the inventor. If not acted upon by other Committees, we recommend an award of a Silver Medal, as an invention for novelty and perfection.

No. 37—Class 5, Section 2.—The invention of A. F. POTTER, of a Breech Loading Cannon and projectiles, is one of uncommon merit and displays great research and ingenuity in overcoming difficulties, and a knowledge of the laws regulating windage of projectiles, and explosive force of gunpowder, which calls for special

commendation at the hands of the Committee. We think him entitled to a Silver Medal.

No. 631—Class 3.—PORTER & COLLINS exhibit an oscillating Ore Reducer and Duster of novel construction and design, being an application of the crushing principle involved in the well known Chili mill. The simplicity of the Chili mill is however lost, but we should judge it would work effectively, cheaply, and well, as a reducing machine for quartz and other ores.

No. 649—Class 3.—W. H. HEPBURN exhibits an Amalgamating Pan for grinding and amalgamating quartz and other ores of novel and ingenious construction. Of its capacity for accomplishing what is claimed for it by the inventor, we have no means of ascertaining as a practical result could only be obtained when in actual and continual operation, and on different ores.

No. 400—Class 5, Section 3.—PETER PORTOIS has on exhibition an Earthquake-proof Chimney-top, Earthquake-proof Bricks and an improved Rail; all showing considerable inventive application of available means to secure desirable results.

No. 565—Class 15.—THORNTON WESTLY exhibits an improved Sofa-bed, a very ingenious arrangement of sofa, or bed, exhibiting a neat and luxurious sofa which can be readily transformed into a spring bed.

No. 277—Class 11.—ORDERMOTT & ETLIN, have an ingenious Fountain Pen and Pencil which commends itself to constant writers and, as a convenient and desirable pen, or pencil, with which the writer can supply the pen with ink at will from a fountain in the handle.

JAMES J. CROWLEY exhibits a Grain Separator and Blue Stone mixer of apparent good working capacity and ingenious application of power.

No. 151—Class 8.—JOHN MCLEOD exhibits an ingenious and simple Lock or Latch and Knob for room doors, combining simplicity, strength, small cost, and ease of application. We think him entitled to a Diploma if not awarded in some other class.

J. L. BOONE, Sewing machine needle, being a needle with the eye in the point but formed on one side by a cut, and having a split cut into the shank or body of the needle, making a spring to partially close the eye on being threaded by pressing the thread into the eye.

Class 8.—The SUPLE NEEDLE COMPANY exhibit a Sewing Machine Needle with the eye in the point formed by cutting through on one side and threaded by pressing the thread in on the open side and retained in place by the tension of the thread. These two needles claim to obtain the same results; facility in threading and equal wear with the Howe Needle now used by all sewing machine makers. Your committee think them both ingenious attempts to overcome a difficulty in the use of the sewing machine by persons of imperfect vision, and they may become of general use in sewing machines in their present, or a modified form, yet the weakening of the eye of the needle particularly small ones, will hardly compensate for the increased facility in threading.

No. 209—Class 15.—DEROME & STROUT, exhibit a neat arrangement of Inclosed Bed in a Book Case or Secretary.

No. 686—Class 6.—J. S. PHILLIPS has a complete and portable assay furnace for prospectors and others, ingeniously arranged.

No. 510—Class 15.—A. J. FORBE exhibits "The Pet of the Boudoir," a neat and comprehensive arrangement of a ladies work table, writing desk, and other articles of a ladies boudoir combined in one.

No. 619—Class 15.—L. CASTIGNINO, has excellent examples, of Inlaid Work on exhibition, but not calling for comment at our hands as not inventions of this year.

No. 39—Class 1, Sec. 2.—W. H. T. CLARK has on exhibition a Lift and Force Pump of new and ingenious arrangement, also a Stuffing Box of ingenious and novel details. Of the pump, your Committee made an examination and find it combines many excellent features of novel and ingenious details, the piston arrangement and packing the valves and air chamber and vacuum chamber all merit recognition as displaying much thought and ingenious application of well known principles of hydraulics. The mechanical arrangement of the pump we think can be improved; but so much inventive genius is displayed in the principles that we recommend an award of a Silver Medal if not already provided for in its class.

No. 40—Class 1, Sec. 2.—Of the Stuffing Box, we think it an ingeniously arranged mechanical contrivance of a series of metallic discs, so arranged within an interior stuffing box that the steam compresses the cut discs, by pressure on the interior edges and against the flat faces of the discs, exposed to the action of the steam, thus packing the discs against the piston rod in proportion to the pressure of steam.

We think it an improved packing to any known, and further that a lateral play of the piston-rod can be had without injury of cutting as in the ordinary hemp packing. The objection of increased cost will lay against it and we think it can be simplified without injury to its efficiency. We recommend an award of a Silver Medal, if not provided for in some other class.

We examined with care the Dump wagon of JOHN CRAIG, and find his improvement consists of a bottom so arranged that two longitudinal sections are hinged or pivoted on centres, and connected by means of a rod and lever attached and arranged by the drivers seat, so that at will the driver can by means of the lever, cant the two bottom longitudinal sections and deliver the contents of the wagon on the

ground beneath. The arrangement is simple, effective, and not likely to get out of order. We recommend a Diploma.

No. 1—Class 3.—The direct acting Steam Quartz Crushing machine of G. A. TAYLOR was examined by your Committee with much interest. The crusher consists of two vertical stems, with shoes and dies of similar construction to those in common use, but the stems are actuated by steam cylinders connected with the apex of a heavy framing of wood; one cylinder to each stamp of 6 by 14 inches stroke, the valve motion being regulated by the up stroke of the stem and the stroke of the stamp being accelerated by the steam pressure of the cylinder to equal from 1800 to 2000 pounds each stroke and making from 120 to 130 drops per minute. The whole arrangement exhibits great ingenuity and an intimate knowledge of the requirements of a quartz crushing machine. It is claimed that it will do the work of a 15 stamp mill. Of its capacity for work and durability for constant work we cannot give an opinion, but we think it efficient and cheaply constructed and displaying good mechanical construction and well worthy a more extended trial than it has yet had. We recommend an award of a Silver Medal if not provided for in its class. There being no originality in the application of steam to the stamp stems direct we cannot give the machine that prominence it would otherwise have claimed at our hands.

All of which is respectfully submitted by the Committee.

WM. F. HERRICK.
B. H. FREEMAN.
JOHN W. CHERRY.
D. FARQUHARSON.

CLASS 1.

In this department but few new machines were exhibited, all the available skill and sagacity seems to concentrate on steam motors, and as in consequence, although the field for motive powers is large, yet the practice of the age in the application of natural agents, confines it in extent to very narrow limits.

Everywhere in California the Steam Engine as a motor stands pre-eminent, and in its various applications, whether for pumping, hoisting, saw mills, flour mills, marine use or manufacturing, it has been adopted here, and as a piece of mechanism in the highest state of perfection.

So far manufacturing has pretty much concentrated in San Francisco, and there being no available water power, steam does all the work. California has abundance of water powers from the various mountain streams which run all the year round, but heretofore the difficulties of transportation have precluded their use to any great extent.

Nevertheless the inventive and practical genius of our mechanics have made the power of a natural water head available, and during the last 10 years have produced a variety of water wheels and water pressure engines applicable more particularly to the requirements of the mining industries.

To the third branch of natural powers—much attention has been paid by our mechanics, and the results show some admirably arranged, self-regulating Wind Mills and Pneumatic Engines, the steady trade winds blowing through the city of San Francisco and distributing itself up the Sacramento and San Joaquin valleys, furnish abundant motive power during the summer to enable the farmer, gardener, etc., to pump waters for irrigating, etc., at a small outlay of capital.

The abundance of Petroleum on this coast and its comparative accessibility to market, would furnish inexhaustible and cheap fuel, if the contrivance for its proper combustion, were sufficiently perfect to make its use practical under charge of an ordinary fireman. The apparatus on exhibition at this Fair, known as the Taylor oil burner was employed for some 3 or 4 weeks and gave satisfaction in point of economy, cleanliness and ease of management. Unfortunately the supply of crude petroleum in this city failed before the practical test intended to have been made was consummated, compelling the removal of the apparatus, and employment of Monte Diablo Coal for the remainder of the term of the fair. We are assured by Messrs Stantord, oil dealers, that crude petroleum can be furnished in this city at \$1.00 per barrel of forty gallons—and we trust that further experiments of a thorough nature, may make available, the vast supply of crude petroleum that lies unappropriated for any useful purpose on this coast.

In the manufacture of the articles included in this Class, there are about 26 firms engaged in this city, with an aggregate capital of one million two hundred and fifty thousand dollars, and employing, when ordinarily busy, twenty-five hundred men. Locomotive, Stationary, and Marine Steam Engines, Turbines, Water Engines and Wheels, Steam Generators and Boilers, Windmills, Pumps, etc., of every capacity are made at our Works, and supply the whole of California, Nevada, Idaho, and portions of Mexico, Hawaiian Islands and Japan. The first Iron Works were started in 1849, by Peter and James Donohue, on First Street—then called Happy Valley—a very rude affair, since grown into the Union Foundry of the present day. The first successful casting is now in the cabinet of the Mechanics' Institute, and possesses interest from its antiquity.

8,674 tons of pig iron were consumed during the year 1869; some 200 tons of which were manufactured in Oregon, at the Oswego Iron Works, and the quality of

which compares most favorably with that imported. It is hoped that this most important manufacture may receive the attention which its extensive use demands.

Report of Committee on Class 1, Section 1.

CLASS I

MACHINERY FOR THE APPLICATION OF POWER.

SECTION 1.

Steam Engines, Boilers, etc.

3. J. T. Ford, miniature steam engine.
9. Geo. T. Pracy, 8-inch engines with fittings.
10. " " " 24 Pracy's governors.
153. H. B. Martin, double-acting oscillating steam engine.
215. Michael Lawton, model of steam engine.
270. Charles O. Farciot working model of steam engine.
384. T. W. Burns, Taylor oil burner, steam generated by crude petroleum, in use under the Pavilion boiler.
388. J. W. Bowker, model of improved smoke stack and spark killer.
411. Edwin Squires, a one horse-power steam engine.
420. Jas. Scrimgeour, model of steam boiler and steam digester.
525. David Stoddart, 13 Pickering's engine regulators.
529. David Stoddart, model of Gifford's injector.
624. Fuller & Co., Johnson's equalizing steam heater.
636. John L. Constable, patent steam packing and piston.
657. Keep & Bargion, (Stockton) No. 5 Root's force blast blower.
665. W. H. Woods, improved steam cylinder cocks.
670. P. & R. Wallace, upright engine, (made by exhibitors who are apprentices in the Union Iron Works).
716. L. A. Gould, D. M. Swain's steam alarm water gauge.
717. H. S. Smith, set of Dunbar's steam piston packing.
784. R. L. Harris, Carvalho's patent steam superheater.
821. M. & A. Wilcox, (Sac.) 3 sizes of Wilcox's patent steam water lifters.
822. Marsh, Pillsbury & Co., one B. F. Sturdevant's No. 6 blast blower.
823. Marsh, Pillsbury & Co., one B. F. Sturdevant's No. 2 blast blower.
824. H. J. Booth & Co., one 16-inch bore, 30-inch stroke slide valve, cut-off stroke engine.
718. Baker & Hamilton, one 8½-inch hoisting steam engine.
305. Treadwell & Co., one Hoadley's portable steam engine.
866. H. J. Booth & Co., Armstrong's patent steam superheater with 16 pans.
894. Wickie Darling, One 'Gardner' Governor one Dreyfus cylinder lubricator.
3. J. T. Ford, *Miniature Steam Engine* of Silver, remarkable for neatness of workmanship on a small scale. So small as almost to be invisible when running; showing less steam from its exhaust than would rise from a thimble full of water when boiling. Awarded Certificate of Merit.
9. GEO. T. PRACY, 8 inch *Engine with fittings* a plain substantial cheap engine. Well put together, good workmanship, and calculated to do good service. Awarded a Diploma.
10. GEO. T. PRACY, 24 *Governors* of various sizes. Invented by himself, made for quick running on the same principle of Pickering, but instead of steel springs with balls attached in the middle, they have the same balls attached to jointed arms, kept to the center by means of a cranked arm, pressed by spiral brass springs set in a pot making a light cheap, and effective governor. The whole governor is got up in malleable cast iron, and for lightness and strength is perfect. This is a California invention, and though those exhibited were made in the Eastern States, will be hereafter manufactured in California. Awarded Silver Medal.
153. H. B. MARTIN, *double acting oscillating steam engine*, California invention and manufacture. Double Cylinder with taper plug between, upon which they oscillate, the pistons are connected by outside rods, from cross head on piston rod, from thence to a crank shaft at one end. The steam is admitted through parts opened and closed by the motion of the cylinders, and allow a very direct action of the steam. of the plug forming the valve and gudgeon, does not suffer by the strain and motion and wear out of truth, this engine promises to give good satisfaction. It can be cheaply made and run at a high velocity and yet have little weight. Award, Diploma.
215. MICHAEL LAWTON, *model of steam engine*. Chiefly remarkable from its being made by a young apprentice without the benefit of tools, and made from all kinds of material. It shows considerable resource and adaptability of mind, and mechanical ingenuity above the average. Award, Diploma.
338. T. W. BURNS, *Taylor oil burner*, by which steam for the use in the Fair for two weeks was made. This is certainly the most important feature under our notice and we regret very much the want of any reliable data to form any opinion upon its working qualities or economy. Award, Diploma.
388. J. W. BOWKER *Model of improved smoke stack, and spark killer*. This is supplied with a number of small 1½ tubes, instead of a wire screen through which the smoke and sparks are driven. The tubes are set to break current, and break up

any particles that may be passing. They are on trial on the Central Pacific and other roads. Award, Diploma

411. Another engine made by an apprentice from the Vulcan Iron Works, Edward Squires, neat and well finished. Award, Diploma.

525. DAVID STODDART, exhibits 13 *Pickering Governors*. Eastern invention and manufacture, are made to run at a high speed. Centrifugal motion or force of balls counteracted by spring which operates upon the valve. Award, Diploma.

529. The same person exhibits a model of Giffard's Injectors of which he is the agent for California.

624. FULLER & Co. *Johnson's equalizing steam heater*, designed to heat buildings and rooms. A close cylinder, through which passes a number of tubes communicating top and bottom with the open air. In the bottom of the cylinder is put a small quantity of water, which is heated by a lamp or gas jet and converted into steam, and again condensed by contact with sides and tubes, and again converted into steam, giving off its heat from a large surface to the surrounding air, arrangements made to thoroughly condense the steam before it escapes, making the loss of water practicably nothing. For a mild and equable heat, this is very good. Award, Diploma.

636. JOHN L. CONSTABLE, *steam packing and piston*. This piston instead of depending on rings, to make it steam tight has grooves cut around piston, causing thereby a large amount of friction to the steam in passing. With enough grooves and a well fitted piston there will be little or no leakage. Award, Certificate.

657. KEEP & RARGION of Stockton, No. 5. *Roots force blast blower*. A power blower of Eastern Invention California manufacture. One of the best positive blowers now made, simple in its construction, and durable in its working, extensively used for foundry use, and for forced blast in mines. Too late for competition.

670. P. & Wallace, *upright engine*, made by themselves while apprentices in the Union Foundry. This engine is a good full size engine, and not only works well, but shows good judgment in the makers, who not only employed their time and ingenuity in designing and making this, during their leisure hours as amusement. Not content to make a toy, but have produced a practical and a valuable engine, of capacity enough to repay them their labor.

716. L. A. GOULD, *D. M. Swain's steam alarm gauge*. An eastern invention and of eastern manufacture, very valuable upon any steam boiler, and reliable, sure to alarm if short of water.

717. H. S. SMITH, *Dunbar's steam packing piston*. Extensively used on this coast.

784. R. L. HARRIS, *Cavallo patent steam superheater*. A novel apparatus giving a great surface exposed to the steam and found to be lasting in this difficult operation. A number of them in successful operation in California.

820. M. & A. WILCOX, of Sacramento, 3 sizes of *Wilcox's Patent Steam water Lifters*, in which water is lifted by the vacuum formed by condensing the steam, and afterwards forced by steam pressure to the height required. A cheap ready machine for this purpose, where economy of fuel is no great object.

822. MARSH, PILLSBURY & Co., one of *B. F. Shurdevant's No. 2 Blast Blower*, a centrifugal blower, which for beauty of workmanship and design is unsurpassed; certainly one of the best of this class of blowers. Eastern manufacture.

824. H. J. BOOTH & Co., one 16 x 30 *Engine*, with cut off. This engine is a good every day engine. Not built expressly for the Fair, but was put up in a hurry to supply power at the last moment. It works smooth and well. Awarded a Diploma.

518. BAKER & HAMILTON, 8½-in. *Hoisting Engine*, very neat strong, compact upright boiler and hor. engine, well adapted to all purposes. Eastern make.

305. TREADWELL & Co., one of *Hoadley's Portable Steam Engines*. A well-known type of engine extensively used in California. Eastern manufacture. Awarded a Diploma.

JOSEPH MOORE,
MARTIN BULGER,
B. P. BRUNNER.

San Francisco, October 29, 1869.

Report of Committee on Class 1, Section 2.

SECTION 2.

HYDRAULICS, HYDROSTATICS AND PNEUMATICS.

- 20. Aetna Foundry, Hanscom & Co., Hayes' steam pump.
- 39. W. H. T. Clark, Clark's patent pump.
- 40. W. H. T. Clark, metallic stuffing box
- 133. Berry & Place, 2 of Blake's patent steam pumps.
- 218. A. Myers, (Portland) Leffel's double turbine water wheel.
- 221. Fuller & Co., Bodine Jonval turbine water wheel.
- 363. V. S. W. Parkhurst, 2 champion force pumps.

- 442. Linforth, Kellogg & Rail, Gerrish force pump.
- 463. V. Cushing, 6 Excelsior force pumps.
- 526. David Stoddart, 7 Cameron's special pumps.
- 527. David Stoddart, 2 Sewell & Cameron's fly wheel pumps.
- 548. Baker & Hamilton, Earle's patent steam pump.
- 627. W. D. Hooker, force pump, (California invention).
- 637. Walmsley & Smith, model of a Smith pump, (California invention).
- 658. Keep & Bargion, (Stockton), two globe force pumps.
- 671. N. D. Laswell, two force pumps.
- 689. Walmsley & Smith, Smith's pump, connected with windmill in yard.
- 715. Pacific Pump Manufacturing Company, American submerged pump.
- 825. H. B. Martin, one double-acting oscillating steam pump.
- 914. Wilcox, water lifter.

To the President and Managers of Seventh Industrial Exhibition.

GENTLEMEN: Herewith we beg to hand you our report.

20. AETNA FOUNDRY, HANSCOM & Co., *Haye's Steam Pump*. This pump, with others in operation, was tested to show the degree and steadiness of vacuum which could be obtained under the left valve, also to show its efficiency in the actual quantity of water discharged, as compared with its measured capacity.

In the first test the result was excellent, the vacuum being very steady, and in the second, it gave the second best result; the valves of india rubber being new and rigid prevented that high result which it may be expected to give after being in operation such a length of time as to relax the valves.

For severe work, fire purposes, endurance, and general application we, consider it excellent. It is constructed with a slide valve worked by an eccentric, ingeniously and substantially arranged, which gives such a pump the preference over those the valves of which are operated by an arm from the piston rod. It is a California invention.

21. We recommend that a MEDAL BE AWARDED to it as the best steam pump for severe work, fire purposes, endurance, and the most general application. Awarded a Diploma.

39. W. H. F. CLARK, *Clark's Patent Hand Pump*, California invention. This pump yielded the best results in pumping and retained a good vacuum, while it has many points to recommend it, we think it is not in its construction so simple or accessible as to meet the general requirements. We recommend a Diploma. Awarded a Certificate.

BERRY & PLACE, *Blakie's Steam Pump*. This pump yielded the best results as to the quantity of water discharged as compared with its measured capacity. The valves are of brass, well arranged. The steam valves are well arranged for operating the pumps either fast or slow.

We recommend that a medal be awarded to it as the best Steam Pump—the valve of which is operated by an arm from the piston rods. Awarded a Silver Medal.

218. A. MYERS, *Leffel Double Turbine Water Wheel*. This wheel has proved itself to be one of the most efficient wheels made, we recommend that it a third medal can be given in this section, to award it in this case. Awarded a Diploma.

221. FULLER & Co., *Bodine Jonval Turbine Water Wheel*. This is a good wheel and deserves a Diploma. Awarded a certificate.

463. V. CUSHING, *Excelsior Fire Pump*. Gave a good result and retained a steady vacuum. It is simple in its construction and the valves are very accessible. We recommend a Diploma. Awarded a Diploma.

526. DAVID STODDART, *Cameron's Special Steam Pumps*. These pumps were not arranged for testing. They appear well made and calculated to give a good result. Awarded a Certificate.

526. D. STODDART, *Sewell and Cameron's Fly Wheel Steam Pumps*, is one of the same class as the Hayes' pumps, it was not arranged for testing. It appears well made and warrants by its construction a good result. We recommend a Diploma. Awarded a Certificate.

548. BAKER & HAMILTON, *Earle's Steam Pump*. It is well made, of good construction, yielded a fair result, and retained a steady vacuum. We recommend a certificate of merit. Awarded a Certificate.

627. W. D. HOOKER, *Force Pump*, Cal. invention, gave a very good result, the vacuum was not steady, a claim not made by the inventor. It is operated very easily, it is double acting and has only two valves. We think it deserves a Diploma. Awarded a Certificate.

825. H. B. MARTIN, *Double Acting Oscillating Steam Pump*. This, we understand, is not a competitor, we, however, tested its operation and found it to give an excellent result in pumping, it obtained a high degree of vacuum but did not retain it.

914. WILCOX *Water Lifter*, A California invention, is not in our list—we therefore only mention it. For purposes for which it is designed it is a superior apparatus, and we judge economical in its use of steam. We recommend, if it can be done, to give this a special medal, as it does not come under the class of pumps.

JAMES SPIERS,
WM. H. BIRCH.

CLASS 2.

MACHINERY AND TOOLS USED IN THE MANUFACTURING AND PRODUCING ART.

The ingenuity of man taxes itself to construct new machines and tools whereby the expenditure of mere manual labor may be reduced to a minimum.

In this class there were exhibited various new contrivances each of special value in its application. The inventor and mechanic has always found time and opportunity "even in the earlier history of California" to turn their attention to something else than searching for the precious metals or matters directly connected therewith, and an examination of the Reports of this and the preceding exhibitions of the Mechanics Institute will verify this statement and show a creditable list of worthy inventions under this head.

The facilities in San Francisco for manufacturing machinery and tools have increased fully in proportion to the requirements of the time, and although no one firm has yet made a speciality of tool manufacturing on a very extensive scale, (Pacific Saw Manufacturing Co., excepted) yet the time is rapidly approaching when nearly if not quite all the tools and machinery required on the Pacific Coast will be made here.

The greater part of this work is done in the machine shops and foundries, and referred to in introduction to Committee Report in Class 1; but in addition to which are about 30 shops engaged in the manufacture of tools and machinery with an aggregate capital of 150,000 dollars and employing when full about 500 men.

Report of Committee Class 2, Section 1,

CLASS 2.

MACHINERY AND TOOLS USED IN THE MANUFACTURING AND PRODUCING ARTS.

SECTION 1.

Wood and Metal Finishing Machinery.

2. J. T. Ford, double hook and eye machine.
8. George A. Day, jig belt saw, with swivel table.
11. George T. Pracy, 2 lathes.
12. George T. Pracy, patent punch.
13. George T. Pracy, patent shears.
14. George T. Pracy, upright drill.
15. George T. Pracy, 4 lathe chucks.
30. T. Stibbins, jig saw.
52. Pilkington & Lane, Excelsior wood saw.
129. Berry & Place, variety wood turning lathe.
130. Berry & Place, engine lathe.
131. Berry & Place, planing and matching machine.
132. Berry & Place, portable drilling machine.
351. T. D. Young, engine lathe.
352. T. D. Young, iron shaping machines.
358. Otis Jackson, endless or band saw.
433. F. A. Huntington, shingle machine.
437. J. Kindleberger & Wm. A. Arnold, blind shade tenoning machine.
438. J. Kindleberger & Wm. A. Arnold, double-acting blind wiring machine.
522. William Sellers & Co., (Phila. Pa.) 12-inch shaping machine.
523. William Sellers & Co., (Phila. Pa.) 2-inch bolt screwing machine.
541. Baker & Hamilton, one medium threeside molding machine.
618. L. Castagnino, machine for inlaid work.
879. Robinson & Romain, 2 engine lathes and counter shaft.
880. Robinson & Romain, 1 wood turning lathe.
881. Robinson & Romain, 1 power planer.
882. Robinson & Romain, 2 planer centers.
888. A. G. Waterhouse, 1 Mechanical power.
905. M. Ettenger, fringe and gimp loom.
916. James Brodie, revolving steady rest.

To the President and Managers of the Seventh Industrial Exhibition of the Mechanics' Institute.

In accordance with instruction your committee having performed the duties assigned it, beg leave to present the following Report.

437. **Kindleberger and Arnold, Blind shade tenoning machine.** This is not an entirely new machine as some portions of it are in common use but the main and most essential features are entirely new and of very great and decided improvements the machine being self-acting in a great degree and making its work perfect with three fourths less handling than the old machine, and can be run by a boy without danger; whereas, the old machine require experienced hands to run them.

It is evident that this machine has been the subject of much thought, and its improvements are substantial and of great importance to the public, and being a Californian invention, patented September, 1869, we recommend for the first premium. Awarded a Gold Medal.

2. **J. T. Ford, Double Hook and Eye machine.** There is much merit in the design of this machine, the construction being entirely new, being double working in all its details it thereby accomplishes twice the amount of work in the same time as the machines in general use. The space the machine occupies while working the hook and eye is 18 inches by 24 inches, whereas it requires two machines occupying a space of 3 feet by 4 feet each to accomplish the same result in the old way. This machine is strong and well made in its various parts, and reflects much credit on the maker as an ingenious and skillful workman, and is in the opinion of the Committee entitled to the second premium. Awarded a Silver Medal.

131. **BERRY & PLACE, Planing and Matching Machine.** This machine has many new and decided improvements, and it seems to have been the study to produce a machine to accomplish various kinds of work with the least possible delay in making the changes. The safety of the workmen has been regarded by means of the protecting guards thrown over the revolving cutters, and an ingenious device has been contrived for oiling all the working parts while in motion; there are several other improvements which seem to make a desirable machine for the purposes required and in the minds of the committee it deserves a Second Premium. Awarded a Silver Medal.

438. **KINDLEBERGER & ARNOLD, Double Acting Blind Wiring Machine.** This machine seems to be a decided improvement on the old style, performing twice the work in the same time, and is apparently well suited for the work to be done, accomplishing the same to perfection. A third premium is recommended. Awarded a Diploma.

358. **OTIS JACKSON, Endless Band Saw.** A superior machine for many kinds of work and would recommend itself to the notice of any person needing a large amount of work done in a short time. A Third Premium is recommended. Awarded a Diploma.

52. **PILKINTON & LANE, Excelsior Wood Saw.** A novel machine and a new application of motive power to an ordinary Buck Saw, is very effective in its operation and easily worked by one or two men. A Third Premium is recommended. Awarded a Diploma.

8. **GEORGE A. DAY, Jig Belt Saw with Swivel Table.** This machine is well and strongly made, smooth and noiseless in its motions, there being no dead points. Being well and evenly balanced it keeps an even tension on the saw, thereby causing little or no vibration when in motion, it is well adapted to general use and in our minds is entitled to a Third Premium. Awarded a Diploma.

12 and 13. **GEORGE T. PRACY, Punch Shears.** These machines work on an incline plane with a toothed wheel and rack to prevent slipping. They are strong in their motion and will bear inspection. A Third Premium is recommended.

14. **GEORGE T. PRACY, Upright Drill.** A strong good proportioned and well made tool, its appearance indicates that it was constructed under the supervision of one who understands what is required to make a good dressing machine. A Fourth premium is recommended. Awarded a Certificate of merit.

351. **T. D. YOUNG, Engine lathe.** This tool is from the New Haven manufacturing Company. Their tools are well known on this Coast and have had for some time past the preference in the market. This lathe is much better constructed than the tools from this firm have heretofore been. Fourth Premium recommended. Awarded a certificate of Merit.

523. **WILLIAM SELLERS & Co, Bolt Cutting Machine.** A machine for cutting threads on Bolts from $\frac{1}{2}$ inch to 2 inches in diameter. It has many improvements over the old style machine, and the character of the work done by this firm is well sustained by this machine. A Fourth Premium is recommended. Awarded a Diploma.

30. **T. STEBBINS, Jig Saw.** In the opinion of the committee there are some good points in its construction, but for general use it is not a desirable machine.

11. **GEORGE T. PRACY, 2 Lathes.** These lathes are a fair sample of eastern made lathes, there are however some peculiarities connected with them, which are improvements.

15. **GEORGE T. PRACY, 4 Lathe Chucks.** This Chuck is a good sample of that kind of article; these tools are from the house of L. W. Pond of Worcester Mass., but little known on this coast, they will however stand inspection.

130. **BERRY & PLACE, Engine Lathe, Wood, Light and Co. makers,** An ordinary tool and not up to the mark as an improved tool.

541. BAKER & HAMILTON. Moulding Machine. This seems to be a machine in common use nothing new in the way of improvements.

618. L. CASTAGNINO. Machine for inlaid work. This machine is rude in construction, it may be however just the thing for the purpose required.

129. BERRY & PLACE. Variety Wood Turning Lathe. A very good machine for the purpose intended, it seems like the kind in common use.

132. BERRY & PLACE. Portable Drilling Machine. A very good machine for hand drilling, and can be used as a common ratchet drill or with a crank, is convenient and can be placed so that the drill will stand in any position, it is an excellent machine where much work is done by hand.

352. T. D. YOUNG. Iron Shaping Machine. A fair machine for light work, from the New Haven manufacturing Co., nothing new about its construction.

433. F. A. HUNTINGTON. Shingling Machine. The exhibitor was not found to explain his machine.

522. WILLIAM SELLERS & Co. Iron Shaping Machine. This is a superior machine for the purpose claimed, and from its appearance indicates that no pains have been spared to make it a first class tool and speaks well for the builders.

All of which is respectfully submitted.

H. S. SMITH.

GEORGE M. WETHERBEE.

Report of Committee Class 2, Sec. 2.

SECTION 2.

MISCELLANEOUS MACHINERY.

- 23. M. P. Hopkins, (Lawrence, Mass.) model of "step for spindles."
- 24. C. P. Traverse & Co., 2 French burr mill stones.
- 51. A. V. Smith, improved store truck.
- 56. J. B. Johnson, model of "Johnson's" patent hoist.
- 92. J. Spaulding, carpet beating machine, "Holm's patent,"
- 94. J. W. Sutton, rotation dynamometer.
- 220. D. Simpson, Boston Union gas machine.
- 241. P. G. Wilhite, model of Reynold's improvement on flour bolts.
- 248. J. W. Quick, quartz smutter and shaker screens.
- 344. Atwood & Bodwell, 2 Excelsior windmills and one model (working) of same.
- 357. William Lyne, hair picker.
- 365. A. Williams, model of "Douglass" brick machine.
- 381. C. W. Stevens, gas machine.
- 572. A. S. Hallidie, improved grip pulley for conveying power.
- 581. Pacific Straw Works, frame making machine.
- 667. H. J. Booth & Co., lot of wheat and quartz screens.
- 835. Redington, Hostetter & Co., Sherwood's Automatic bottle filling machine.
- 844. D. O. McCarty, Sloper's apparatus for generating illuminating gas from light. Hydro Carbon.
- 632. B. P. Rider, Boston, model brick machine.

To the President and Managers of the Seventh Industrial Exhibition of the Mechanics' Institute.

GENTLEMEN: The undersigned Committee appointed to examine articles exhibited in above class and section, report as follows:

- 24. C. P. Traverse & Co., 2 French burr mill stones.
- 248. J. W. Quick, quartz smutter and shaker screens. Awarded a Diploma.
- 572. A. S. Hallidie, improved grip pulley for conveying power. Awarded a Diploma.
- 632. B. P. Rider, model of brick machine—the simplicity of this machine especially recommends it. Awarded a Diploma.
- 94. J. W. Sutton, rotation dynamometer. Awarded a Silver Medal.
- 344. Atwood & Bodwell, Excelsior wind mills. Awarded a Diploma.
- 365. A. Williams, model of Douglas brick machine. The beautiful workmanship of this model deserves an especial mention. Awarded a certificate of merit.

The following articles deserve a favorable mention:

- 23. M. P. Hopkins, model of step for spindles.
- 51. A. V. Smith, improved store truck.
- 56. J. B. Johnston, model of Johnston's patent hoist.
- 92. J. Spaulding, carpet beating machine (Holme's patent),
- 241. P. G. Wilhite, model of Reynolds' improvement on flour bolts.
- 357. William Lyne, hair picker.
- 581. Pacific straw-works, frame making machine.
- 381. C. W. Stevens, gas machine, with reference to this machine your Committee is unable to make any report.

D. B. HINKLEY,
JOHN T. AMOS,
HORACE DAVIS.

CLASS III.

MINING, QUARRYING AND METALLURGY.

Machinery in connection therewith.

Mining in California still occupies a position of prime importance, although at this exhibition there were few noticeable novelties, and few exhibits compared to former years, owing more to the indisposition of inventors to exhibit that which had been placed in previous Fairs, and the late temporary depression in the mining interests, than any lack of importance of the class.

The refractory character of some of the ores in California has challenged the skill and ability of the most experienced chemists and metallurgists; but they are fast yielding to experience and the pertinacious assaults of scientific experiments, and it is satisfactory to know that some of the most rebellious auriferous and argentiferous rocks are worked to a pitch of accuracy which a few years since was considered impossible.

In the gold quartz mines (comparatively free from refractory ores), a considerable reduction in cost of working for the past year, has been discovered, running from \$6.15 per ton total expenses, for producing the bullion, (at the Benton Mill, Mariposa Estate), to \$9.60 per ton at the Eureka Mine, Nevada Co.

The introduction of powder with more rapid expansive qualities—and in consequence the smaller holes required to be drilled—has to a great extent tended to the more economical working underground, and the introduction of hoisting and running machinery of a character better adapted to the wants of the mine in connection with the comparative absence of the disastrous influence of stock speculators, has brought about better results above ground. Although from various causes there has not been as many companies at work this season, yet from the estimated number of men engaged the results are considered better. Through the various Express Company's the receipts of gold has been as follows: for the year 1868, \$51,173,955; 1869, \$49,286,462; but show an increase in the export of treasure nearly one million dollars, being for 1868, \$36,358,091; 1869, \$37,287,117, value on gold coin.

But slight advance has been made in quarrying. A very good slate for roofing is this year exhibited from Copperopolis, Calaveras Co; but the building stone yet placed in the market has been of an inferior character—or too costly for use—and that which we need greatly at a low price; viz., first-class paving stones, has not yet found their way here.

No attempt has been made here to use machinery for the cutting and extraction of coal; although the coal beds of Monte Diablo, are favorably situated in sandstone formation, and the ingenuity of our mechanics should adopt an economical working machine suitable for this requirement.

Report of Committee—Class 3.

CLASS III.

MINING QUARRYING AND METALLURGY.

Machinery and Appliances in connection therewith.

1. G. A. Taylor, improved Giant quartz mill.
22. Aetna Foundry, Hanscom & Co., cupola and foundry fixtures.
354. J. W. Coffey, patent battery shoe and die.
501. Thos. Varney, 4 amalgamating pans.
617. Risdon Iron Works; 3 shoes and 3 dies for quartz crusher.
631. Porter & Collins, quartz duster.
649. W. H. Hepburn, amalgamating pan.
652. Porter & Collins, quartz crushing machine.
783. D. M. Hosmar, model of patent revolving stamp.
852. W. T. Richard, Amalgamator.
862. Thompson Bros., 2 Patterson's patent forge.

To the Board of Managers of the Seventh Industrial Exhibition.

Gentlemen.—Your Committee respectfully submit the following report:

689. THOMPSON BROS., Patterson's Patent Forge, are very compact and well arranged, easily cleaned and a commendable affair. Awarded a Diploma.

1. G. A. TAYLOR, Improved Giant Quartz Mill. The design of this mill is good, and the details of its construction reflect great credit on its designer, and it will undoubtedly do good service.

The peculiarities of this mill is the direct application of steam to the stamps, the stems of which form a piston rod to the cylinders situated immediately above and resting on the frame work of the mill, each strap being, in fact, a steam engine in itself. As to its merits when compared with an ordinary stamp mill we are not prepared to state. Awarded a Silver Medal.

22. HANSCOM & Co., Cupola and Foundry Fixtures. These gentlemen have a Foundry in full blast, working during the evening hours at the Fair, and produce some excellent ornamental castings, besides being an exceeding interesting feature of

the exhibition it is a practical illustration to a great many who have never seen iron eastings made. We would recommend a substantial token of the worth of this exhibition. Awarded a Diploma.

354. J. W. COFFEE, Patent Battery Shoe and Die.

617. RISPON IRON WORKS. Shoes and Dies for quartz crushing. Good shoes and dies apparently equal to any made.

631. PORTER & COLLINS, Quartz Duster and Crusher. The inventors and exhibitors of these machines are entitled to great credit for their ingenuity and patience in endeavoring to develop what appears to be a new and promising arrangement of devices for economically crushing quartz. Awarded a Certificate of Merit.

Respectfully submitted,

DAVID R. SMITH,
Chairman for Committee.

To the Managers of the Seventh Industrial Fair.

Gentlemen: The Committee appointed to report on amalgamating pans have carefully examined the only two pans on exhibition; viz.

501. THOS. VARNEY, Amalgamating Pans.

649. WM. H. HEPBURN, Amalgamating Pans.

The principle of these pans are radically different, and in our opinion their properties for grinding and amalgamating are very different, we do not hesitate to say that we consider the Varney Pan superior, both in principle and construction, and from the great number of pans in use on the coast, to the satisfaction of the mining community, we think the miner's verdict accords with our own; we are informed that one million dollars worth of these pans have been manufactured on this coast. We consider it entitled to a gold medal. Awarded a Gold Medal.

The Hepburn Pan we consider entitled to a diploma. Awarded a Diploma.

All of which we respectfully submit,

CHARLES PLETY,
JAMES SPIERS.

CLASS IV.

AGRICULTURAL MACHINERY, IMPLEMENTS & TOOLS.

In this department the exhibit was very good and may be taken as good evidence that the agricultural interests of the State are receiving more attention as the States resources in that particular are becoming developed.

It is a fact beyond dispute that California as an agricultural State has no superior. The peculiarity of the climate, the dry season extending from the ripening of the grain almost to plowing time, and the wet season covering the interval required for the grain to develop, gives opportunities for its culture surpassed by none, and the exceeding richness of its soil has resulted in placing its agriculture on a par with its mining resources, with a probability eventually for outstripping the latter.

Tilling in virgin soil the agriculturalist has so far been supplied with an abundance of rich loam; and ploughing as a rule in California, has been but scratching on the surface, seldom exceeding a depth of 4 or 5 in., and it is claimed by many to be the better system and more conformable to the requirements of our dry season by leaving the under soil containing the moisture undisturbed and into which the feeders shoot to supply sustenance during the period of summer drought.

Consequently a vast amount of ploughing is done under the guidance of a single ploughman, and the ordinary team, scarcely calling for the expenditure of power required in the older countries where furrows of 10 and 12 ins. are not uncommon.

Yet considerable attention has been given to Steam Plowing, although all the experiments made have been on the principle of the Traction Engine with indifferent success, it is satisfactory to know that practical men are turning their attention that way, being indicative of eventual good results and a recognition of its necessity where the value of labor is great and often unattainable.

California has about 4,500,000 acres of land enclosed, and it is generally conceded possesses 40,000,000 acres of arable land, but to the square mile in population, averages only 2½ persons, it has just fairly started in building railroads, and during 1869 exported abroad of agricultural products in gold value \$11,277,604 besides wool to value of about 2½ millions more, it is therefore easy to understand why in the exhibition of 1869, the exhibition of agricultural implements, etc. should take a position of importance.

Report of Committee.

CLASS IV.

AGRICULTURAL MACHINERY, IMPLEMENTS & TOOLS.

4. W. P. Watson, Portland, gang plow.

5. Benj. Harris, stable with patent feed attachment.

6. E. H. Willis, 2 cider presses.
21. Ætna Foundry—Hansecom & Co., hydraulic wine press.
35. John Nestor, Portland, apple-pearing machine.
63. G. A. Davison & Co., gangplow, California invention and make.
106. E. P. Hix, model of self-opening and self-closing gate.
194. Hunter & Wiester, grain separator.
216. L. L. Sawyer, Finlayson's seed sower.
247. T. Locher, Oroville, working model of steam plow.
301. E. C. Bickford & Co., 2 of Packard's patent traction gates for farm and garden.
306. Treadwell & Co., 3 of Hutchinson's cider mills.
307. Treadwell & Co., cotton gin.
308. Treadwell & Co., gang plow.
309. Treadwell & Co., Power's seed sower.
310. Treadwell & Co., hand seed sower.
319. Gustaf Gustafson, patent tree and shrub box.
322. L. L. Sawyer, model of Johnson's patent portable fence.
375. Morris Murphy & Co., gang plow.
386. Ives Scoville, side-hill plough.
387. A. Williams, rotary harrow.
408. F. B. Lamb, vegetable cutter.
424. Olpha Bonney, Jr., horse rake.
425. Olpha Bonney, Jr., set of grain lifters.
427. Richard Knott, Suisun, horse power fastener.
428. Richard Knott, Suisun, stake puller.
513. J. D. Arthur & Son, bent axle gang plow, 3 cultivators, 1 patent spring double whiffletree.
514. O. M. Sherman, 2 models of Rouse's patent step and fruit ladder.
539. Baker & Hamilton, 1 fifty-saw cotton gin and condenser.
542. Baker & Hamilton, Sweepstake gang plow.
543. Baker & Hamilton, Gem broadcast seed sower and power.
544. Baker & Hamilton, Baker & Hamilton's Gem broadcast seed sower for horse power.
545. Baker & Hamilton, Buckeye seed drill.
546. Baker & Hamilton, Union mower.
547. Baker & Hamilton, 1 cast steel single plow.
587. C. W. M. Smith, Turner C. Turrington's improved grape crusher and stem separator.
616. E. W. Walton, weed cutter and extra blade.
641. M. C. Hawley and Co., Buckeye mower and reaper, with self-rake attachment.
642. M. C. Hawley & Co., Buckeye mower, with drop attachment.
643. M. C. Hawley & Co., No. 3 Burdick's National hay cutter.
644. M. C. Hawley & Co., 2 Deere's plows.
645. M. C. Hawley & Co., Peoria plow.
646. M. C. Hawley & Co., Collins plow.
661. F. Barnes, patent thill attachment.
679. D. S. Smith model of Randall rake.
680. D. S. Smith, model of Randall rake, improved.
692. Baker & Hamilton, 2 single plows.
693. Baker & Hamilton, Gale's feed cutter.
694. Baker & Hamilton, Sweepstake horse fork.
699. T. S. & T. A. Brown, Brooklyn, Alameda county field harrow.
703. Treadwell & Co., Russell's thrashing machine.
719. J. W. Clark, Haywards, Alameda county, grain separator and bluestone mixer.
749. L. L. Sawyer, patent cow milker.
759. E. B. Hendee, patent trimming shears.
784. John Deere, Molino Ill., 8 assorted plows.
785. John Deere, Molino, Ill., walking cultivator.
834. H. G. Pratt & Co., 1 Eagle hay press.
836. W. Hoag, Bloomfield, Sonoma county, one dog power.
346. W. M. Haynie, improved hop kiln.
638. Hawley & Co., Marsh's harvester.
639. Hawley & Co., clipper mower.
640. Hawley & Co., lawn mower.
877. Knapp & Grant, Wescott's patent churns.
891. D. L. Smith, Model of Randall rake with sower attachment.
901. D. O. McCarthy, Dexter Hathaway, improved grain separator.
926. Warren & Co. potatoe planter.

To the President and Board of Managers, Seventh Industrial Exhibition of the Mechanics' Institute.

Your Committee respectfully report as follows:

513. J. D. ARTHUR & SON, Best Axle Gang Plow. We deem the superiority of this plow to consist in the ease and readiness with which the plows can be raised from the

ground, and the depth of furrow regulated by levers—recommend a first premium. Awarded a Gold Medal.

638. HAWLEY & Co., Marsh's Harvester. It is claimed that the Machine which has been in use all the past season requires but three men (one to drive and two to bind) to run it, thus saving the labor of three men, as six are the compliment required by most other machines.

The binders ride on the machine and bind as fast as grain is cut; thus saving it from being trampled and ridden over, and thereby wastefully shelling out the grain. We advise a second premium. Awarded a Silver Medal.

T. LOCHER, Working Model of Steam Plow. The Committee regret that this Machine has not been more thoroughly tested and its success or want thereof demonstrated.

A very important achievement has certainly been made by securing by the particular arrangement of machinery an equalization of traction on all the four wheels of the driving gear. And we are of the opinion that as the plows are so arranged as very slightly to retard the forward motion of the machine—it will prove a success. That it will do its work well there seems to be but little doubt in the minds of your Committee.

We trust the inventor will lose no time in perfecting and thoroughly testing his invention. We recommend a second premium. Awarded a Silver Medal.

703. TREADWELL & Co., Russell's Threshing Machine. We recommend a third premium. Awarded a Diploma.

834. H. G. PRATT & Co., Eagle Hay Press. We recommend a third premium. Awarded a Diploma.

216. L. L. SAWYER, Finlayson's Seed Sower. Your Committee recommend a third premium for its apparent efficiency and simplicity, and the ease with which it can be kept in repair. Awarded a Diploma.

680. D. L. SMITH, Randall's Rake for Hay. Seems to combine efficiency.

694. BAKER & HAMILTON, Sweepstake Horse Fork. We recommend a third premium. Awarded a Diploma.

194. HUNTON & WEISTER, Grain Separator. Fourth premium. Awarded a Certificate of Merit.

641. M. C. HAWLEY & Co., Buckeye Mower and Reaper, with self-rake attachment. Fourth premium recommended. Awarded a Certificate.

643. M. C. HAWLEY & Co., Burdick's National Hay Cutter. Fourth premium. Awarded a Certificate.

386. IVES SCOVILLE, Side Hill Plow, Fourth premium. Awarded a Certificate.

There are many other very valuable inventions and improvements in agricultural implements and machinery well deserving the attention of Farmers, having as we believe, great merit, and in many instances nearly equal to those the Committee have selected for premiums, but we have deemed such entitled to precedence over others for the reasons set forth in this report. The Committee regret that it was impossible in every case to see a working test of the machinery upon which they have been called to pass judgment.

T. G. PHELPS,
O. W. EASTON.

CLASS V.

NAVAL, MILITARY, AND CIVIL ENGINEERING, AND ARCHITECTURE.

This class is divided into 3 sections, and represent some 42 exhibitors, showing excellence of work, and great advance in the manufactures under this head.

Ship Building on this coast is assuming considerable importance, and it is found there is abundance of excellent timber for this purpose, the vast forests of California, Oregon, and Washington Territories have inexhaustable supplies of Fir, Pine, Red Wood, and Laurel, and along the coast of Alaska for several hundred miles exist forests of Cedar of very large dimensions, close grained and durable, as wrecks of vessels built 50 years since testify, and admirably adapted for the purposes of Naval construction.

A large number of vessels are being built, and at Port Madison is a ship of 1400 tons burden, being constructed under the superintendence of Capt. Westervelt, and it is stated that wooden vessels can be built on this coast for 66 per cent of the cost of construction on the eastern border, and there is no reason to doubt this as the supply of material is ample and close at hand. The various branches of business necessary and incidental to ship building are here. Messrs Tubbs & Co., supplying from their manufactory at the Potrero an excellent quality of Manilla Cordage, and of which they manufactured during the year 1869 3,000,000 lbs. and Messrs. Hallidie & Co., furnished from their manufactory at North Beach, wire Rope for standing rigging, etc., during the year 1869, about 600,000 lbs.

During 1868 there were built 11 steamers, 3 barks, 1 brig, 4 barges, 34 schooners, and 4 sloops, aggregating 7,604 tons of shipping.

During 1869 we built 23 steamers, 2 barks, 15 barges, 48 schooners, and 4 sloops, aggregating, 11,624 tons burthen, being an increase of 4021 tons over the previous year.

The commercial tonnagerequirements have increased proportionately, the number of arrivals being for the year 1869, 3,524 vessels, aggregating 1,145,104 tons, showing an advance of 800 over 1868.

In the department of Military Engineering, comprising explosives, much attention has been paid to Gunpowder and its various modifications and improvements, applicable principally for blasting purposes, and several local manufactories have been in operation, manufacturing Gun, Giant, and Haffenegger Powder. Two large powder manufacturing companies, one located at Santa Cruz Co., the other in Marin Co., supply the demand to a great extent in California and Nevada in successful competition with the imported article, and it may be well to insert the statement of the California Powder Company in answer to a request from the managers, and which is here appended.

Office of the California Powder Works, San Francisco, 21 October, 1869.

To Committee on Award of Institute Gold Medal.

GENTLEMEN: The California Powder Works in presenting their claim for the Mechanics' Institute Gold Medal, would respectfully call the attention of your honorable body to the following statement concerning our manufactures:

Our Company was incorporated in December, A. D. 1861. We commenced the production of Powder in May, A. D. 1864, making in the remainder of that year nine thousand two hundred and twenty (9220) kegs and cases, the greater part of which was blasting powder. From that time we have gone on steadily enlarging our works, and increasing the quality and quantity of our manufacture, until in the year 1867, it reached the amount of one hundred and fifty-two thousand, four hundred and eighty-nine (152,489) kegs and cases of 25 pounds each, or say 3,812,225 pounds. Considerable portions of 1868, and the present year being devoted to the manufacture of sporting powder, the quantity will be something less, but will reach to nearly 2,500,000 pounds each year.

The cost of mining powder at the time our works went into operation, was upwards of six (\$6) dollars per keg of 25 pounds, but by a combination of circumstances, one of the chief of which is our increased facilities enabling us to produce it at less price, we have been able to supply it for the past two years, fresh from the Mills, and of a much improved quality, at, from \$2.25 to \$2.50 per keg. This decrease in the price of powder has given a new impetus to mining operations generally, and has entered largely into the calculations which have resulted in opening many valuable mines, and the employment of much capital and labor that otherwise would have remained dormant. It has produced such a revolution in the working of many mines—as for instance, the deep gravel deposits, where, sometimes, as many as twelve to fifteen hundred kegs are used at a single blast—and has so far reduced the expense of working quartz mines, that its beneficial effects in the matter of the production of the precious metals, on which so large a share of the prosperity of our State depends, is almost incalculable.

The cash capital of the Company paid in is three hundred thousand dollars, but the actual working capital necessary to supply the Works with material and to carry stock on hand reaches a much larger amount.

The principal office for transacting the business of the Company is in San Francisco, while our mills are at Santa Cruz. They consist of fifteen different Mills and Works, in which the various processes of powder manufacture are carried on, and a keg factory complete in all its parts with a capacity for manufacturing seven hundred powder kegs per day.

The powder mills are mostly driven by water, while the keg factory and two of the powder mills are supplied with a powerful steam engine, which can be used as an auxiliary if requirep. Besides these we have saltpetre warehouses and magazines, capable of storing two thousand eight hundred tons of nitre, and seventy-five thousand kegs of powder, and in addition to these we have large warehouses for storage of general merchandisc, and commodious wharf accomodations, together with a wharf at Santa Cruz, seven hundred and fifty feet in length.

The Company feel fully assured that to the extensive works which they have established, the Town and County of Santa Cruz is indebted for much of its commercial and business prosperity, and the State for many hundred thousand dollars of taxable property.

The importance of these works on this Coast, in ease of trouble with foreign powers, cannot be over estimated.

We have employed within our Works, on an average, for the last three years, about one hundred and sixty men, who have been engaged in the manufacture of powder and kegs, and in cutting and hauling powder, wood, and materials for the keg factory. We have consumed in that time in powder and keg materials, say 2,650 cords of powder, wood cut and prepared expressly for that purpose—1,380 cords of red wood for making staves for powder kegs—650,000 pieces of heading—3,200,000 hoops—1,220,000 lbs of sulphur, most of which is produced in this State—and 5,760,000 lbs. of nitrates.

Hoping that after all the applications for the Institute Medal are fairly canvassed, you may deem us justly entitled to it.

We remain, Gentlemen, yours truly,

JOHN F. LOHSE, Sec'y.

The manufacture of powder in California, mainly by the above company, it is stated, has saved to one Railroad Company alone, \$150,000 in one year.

The year 1869 has witnessed rapid progress in railroad construction; the most noticeable perhaps was the completion of the Great Pacific Railroad, which brought California in close communication with the rest of the United States. There are 639 miles of railroad now operating in the State of California, and extensive preparations are being made for new lines connecting San Francisco with the southern portions of

the State, eventually to form a Southern Pacific Atlantic Railroad, and also to have a direct line of Railroad running to Oregon and Puget Sound, on the north. In all branches of engineering much activity has prevailed promising much good for the future.

Report of Committee Class 5, Section 1.

CLASS V.

NAVAL, MILITARY AND CIVIL ENGINEERING, AND ARCHITECTURE.

SECTION 1.

Naval Architecture.

25. Murdock Campbell, model of a pilot boat.
41. George Miledge, model of ship Morning Star.
42. Nicolas Castro, model of sloop-of-war Nevada.
155. J. F. Fugazzi, model of a Venetian gondola.
159. Mrs. M. Carpenter, model of canoe.
192. S. F. Cordage Co., Tubbs & Co., 9 bales of rope, California manufacture.
200. Capt. J. Housman, model of a yacht pilot boat.
205. John E. Kennedy, model of a propeller screw.
225. P. A. Lawson, model of a steamer.
282. B. Reiley, set of rowlocks.
355. O. T. Stacy, steering apparatus.
422. L. D. Herrick, metallic life-boat.
475. J. S. Nichols, model of schooner Caroline Mills.
508. J. G. Perkins, model of propeller.
571. A. S. Hallidie, samples of wire rope, all sizes.
682. E. Wakeman, boat with patent detaching gear.
704. A. Crawford, 2 patent logs.
705. A. Crawford, patent deep-sea lead.
706. A. Crawford, patent capstan.
707. A. Crawford, patent ship's lamp.
712. F. Hansen, model of ship Onward, in glass case.
753. A. G. Waterhouse, model steering gear.
791. I. E. Thayer, model of schooner and pilot boat.
856. Saml. Luke, model of propeller screw.
860. Lloyd & Steward, model of L & S patent anchor.
909. Wm. Smith, model of Yatch "Yankee Mariah."
927. J. W. McKenzie, model of schooner.

To the President and Board of Managers of the Seventh Industrial Exhibition of the Mechanic's Institute, of the City of San Francisco:

The undersigned Committee, appointed to examine articles exhibited and competing for Premiums at the above Exhibition, in Class 5, Section 1, do recommend the following Premiums to be awarded, to wit.

753. A. G. WATERHOUSE. Model Steering Gear. The above is entered as a model steering gear, and the same principle was entered as a General Rotary Mechanical Power. We are of the opinion that the gear is a valuable improvement on any power used for similar purposes. If unprovided for otherwise, we recommend an award of a Silver Medal. *This received the Inventor's Medal.*

571. A. S. HALLIDIE. Samples of Wire Rope and Cord. The samples of iron and steel wire rope and brass and copper window and other cord, are of unusual excellence and variety, and the samples of splicing for ship and bridge work remarkably well done. We recommend an award of a Silver Medal. Awarded a Silver Medal.

791. I. E. THAYER. Model of Schooner and Pilot boat. These models are made of laurel and very highly finished. They display a commendable knowledge of modeling and the requirements of the class of vessels modeled. We recommend a Diploma. Awarded a Certificate of Merit.

192. San Francisco Cordage Co., Samples of Manila Rope and Hawasers. The samples of Rope and Hawasers are of superior manufacture and sustain the well earned reputation of San Francisco Cordage. We recommend a Silver Medal. Awarded a Silver Medal.

682. Capt. Edgar Wakeman. Boat Detaching Gear. This arrangement for detaching a boat's tackle, when lowered from a ship at sea, accomplishes the purpose with great certainty and ease, and with less machinery and more compactness than any other apparatus we know of.

25. MURDOCK & CAMPBELL. Model of a Pilot Boat. A well proportioned and well modeled vessel. We advise a Diploma. Awarded a Diploma.

200. Capt. J. S. HOUSEMAN. Model of a Yacht Pilot Boat. A beautifully finished and neat model. We recommend a Diploma. Awarded a Diploma.

205. JOHN E. KENNEDY. Model of a Propelled Screw. This model of a propeller screw wheel, is something of an innovation, but we should judge it would act efficiently in going ahead. In backing, it does not commend itself to us as a desirable model. We recommend a Diploma. Awarded a Diploma.

42. NICHOLAS CASTRO. Model Sloop-of-war Nevada. Displays great ingenuity and patience.

282. B. REILEY. Set Rowlocks. These rowlocks are hinged on in the inner edge and turn over into the boat at will. We recommend a Diploma. Awarded a Diploma.

355. O. T. STACY. Steering Apparatus. The rudder head is actuated by a pair of worm screws, working into a circular gear on the rudder head, which are in turn rotated by the wheel shaft and gears, an effective apparatus but we think in no way superior to other well tried devices. We recommend a Diploma. Awarded a Diploma.

712. F. HANSEN. Model of ship "Onward" full rigged. This model is decidedly the best on exhibition and displays a thorough knowledge of a ship and her rigging. We recommend a Diploma.

422. L. D. HERRICK. Metallic Life boat. The principles of Life Boat construction in the arrangement of the air chambers are well carried out. We recommend a Diploma. Awarded a Diploma.

475. J. S. NICHOLS. Model of the Schooner "Caroline Mills." This model of a very fast vessel and large carrying capacity for Bay and River Navigation, is a very rough one and from our knowledge of the vessel, greatly unlike her.

860. LLOYD & STEWART. Patent Anchor. Awarded a Diploma.

All of which we respectfully submit.

R. H. WATERMAN.

J. C. COUSINS.

WM. F. HERRICK.

Report of Committee Class 5, Section 2.

SECTION 2.

MILITARY ENGINEERING.

- 37. A. F. Potter, Oakland, breech-loading cannon, with box of projectiles.
- 49. Church & Clark, samples of pieces of fire-works.
- 256. California Powder Works, samples of blasting, sporting and cannon powder.
- 405. Wm. Rudolph, case of guns, gun locks, sporting articles, etc.
- 470. A. J. Plate, 2 cases of guns, pistols and sporting articles, and 1 cartridge machine.
- 576. W. T. Garrett. 2 brass pounders on black walnut carriages, California manufacture.
- 696. Cranmer & Holden, revolving battery gun.
- 701. S. L. Cutter, sample of Hafeneggar powder.
- 829. Little & Keading, 2 cases of guns, pistols and sporting articles.

To the President and Board of Managers of the Seventh Industrial Exhibition of the Mechanics' Institute, of the City of San Francisco.

The undersigned Committee, appointed to examine articles exhibited and competing for Premiums at the above Exhibition, in Class 5, Section 2, do recommend the following Premiums to be awarded, to wit.

256. First premium to CALIFORNIA POWDER WORKS for best BLASTING RIFLE and HUNTING POWDER, long service on the Frontiers with varied experiments under almost every contingency, warrant us in awarding to the power of the California Powder Works the superiority over every article of the kind, for Field Service and Sporting, whether with the Rifle, Shot gun or Pistol, it does not foul the barrel so quickly, burns more rapidly, and sends the load farther than any other powder used by us. Whether the imported powders depreciate in quality by the Sea voyage, and passing through several different climates, or whether its inferiority is the result of inferior manufacture from less pure components, we are unable to determine; nor is it necessary so long as it does exist on this side of the Continent. For blasting purposes we deem the powder under examination very superior where vast masses of rock and earth are to be disintegrated. More powerful preparations, such as Nitro Glycerine, Giant Powder, Hafeneggar Powder &c., are more suitable for submarine blasting, or the rapid destruction of superficial obstacles, but for the upheaval of enormous masses, composed of many different materials, those powders act so violently as to force a passage without accomplishing the desired purpose so effectually as the California Powder Works' powder.

We earnestly represent that in our opinion the California Powder Works Company deserve the Institute Gold Medal, they having expended heavy sums in their undertaking, and built up a large flourishing and important town by their enterprise.

No interest is safe that cannot be defended when assailed by enemies, and the Company have given to California the means for successful and vigorous defence: they have placed in our hands the most important material of war, and have also contributed immensely to the successful and remunerative development of our mining inter

ests, by supplying miners with a powder which is better and cheaper than any that can be obtained elsewhere. Awarded a Gold Medal.

829. Second premium to Messrs. LITTLE & KEADING for California Manufacture of Breech and Muzzle loading Shot Guns and Telescopic Target Rifles with patent muzzles. This exhibit of guns we deem worthy the attention of sportsmen, as being superior to any we have seen. Their beautiful finish, effectiveness, and the care used in producing them, warrant us in recommending that the manufacturers be granted a medal for marked superiority, and as an inducement to additional enterprise. Awarded a Silver Medal.

470. Third premium to A. J. PLATE, for exhibit of California manufacture of Hunting Rifles and Shot guns, and of Foreign manufacture. This display we admit is deserving of the attention of Sportsmen in their selection of guns, and we recommend the Rifles as of superior quality. Awarded a Diploma.

405. Third premium to WILLIAM RUDOLPH for Improved Gun Lock. The strength of the stock on which these locks are used is preserved, which we deem of importance to sportsmen, and recommend them for adoption by the Government, the butt of the musket being more efficient with this lock, than the old pattern. Awarded a Diploma.

696. Third premium to CRANMER & HOLDEN for Revolving Battery Gun. This invention we deem of great use in mining camps exposed to Indians, and where rapid firing and great execution is intended against a large body of men, and would be of service at the prison, for State use. We refrain from expatiating upon this invention, it having received lengthly and honorable mention by the city press, who have given it deserved notice. Awarded a Diploma.

37. Third premium to A. F. POTTER for Breech Loading Cannon and Projectiles. We recommend this invention to the consideration of army officers as a valuable acquisition to artillery for field use. It can be handled with fewer men than the guns now in service and in the event of a Battery being taken by the enemy its efficiency can be at once destroyed. Awarded a Diploma.

49. Third premium to MESSRS. CHURCH & CLARK for Display of Fire Works. Awarded a Diploma.

576. W. T. GARRETT for two Truck Brass 2 pounders. California manufacture, of excellent workmanship and material. Awarded a Certificate of merit. All of which we respectfully submit.

JOSEPH TUTTLE,
JOHN C. CREMONY.

Report of Committee—Class 5, Sec. 3.

ARCHITECTURE AND CIVIL ENGINEERING.

- 176. J. P. Clay, sample of pressed brick.
- 370. M. Clark & Co., Sacramento, lot of fire-brick.
- 372. M. Clark & Co., Sacramento, sewer and water pipe, and samples of clay.
- 383. Asphaltolin Pipe Co., 9 pieces of asphaltolin pipe.
- 400. Peter Portois, patent earthquake and fire-proof chimney, and patent earthquake-proof brick.
- 406. E. N. Robinson, specimens of roofing slate, flagging, etc.
- 434. P. Martin, cement drainage pipe.
- 570. A. S. Hallidie, Hallidie's patent suspension bridge.
- 589. Benj. F. Freemen, specimens of stair work, consisting of stair rails, posts, balusters, etc.
- 613. — Lynch, Lynch's improved reflector, for cellars, vaults, etc.
- 632. B. P. Rider, Boston, model brick machine.
- 654. Pacific Wood Preserving Co., table made of treated wood; 2 samples of street pavement, as they appear when laid, sample of street pavement which has been in drying room of a sugar refiners four months; section of a pile protected against marine worms.
- 709. M. D. Warner, model of Perkin's patent fire-proof ventilated sheet iron window shutter, and door.
- 801. John Daniel, marble mantle and grate.
- 802. John Daniel, 1 Italian statuary marble mantel and grate.
- 446. Hubbard, Sandborn & Co., samples of combination wood posts, railing, balusters, etc.
- 883. A. C. Taylor, sloop hopper with patent traps, patent iron Sinks.
- 889. E. S. Holden, samples of roofing slate from Stockton and Coperopolis Company.
- 912. E. C. Coleman, Coleman's new method of hanging sash weights by concealing the cord.

To the President and Board of Managers of the Seventh Industrial Exhibition of the Mechanic's Institute.

The undersigned Committee appointed to examine articles exhibited and competing for premiums at the above Exhibition, in Class 5, Section 3, do recommend the following premiums to be awarded, to wit:

570. A. S. HALLIDIE. For Hallidie's Patent Suspension Bridge. For novelty in design and in the arrangement of the cables. Awarded a Gold Medal.

333. Second premium to Asphaltolin Pipe Co., for asphaltolin pipe. A valu-

able improvement in pipes, as regards economy, durability and smoothness of bore. Awarded a Silver Medal.

406. Second premium to E. N. ROBINSON, for specimens of roofing slate, flagging, etc. A development of a valuable resource of the State. The article compares favorably with that imported. Awarded a Silver Medal.

654. Third premium to Pacific Wood Preserving Co., for samples of wood treated by the process used by said Company. Awarded a Diploma.

603. Third premium to WM. LYNCH, for Lynch's improved reflector, for cellars, vaults, etc. Awarded a Diploma.

Fourth premiums to the following exhibitors:

589. BENJ. F. FREEMAN, specimens of Stair Work. Awarded a Diploma.

372. M. CLARK & Co., (Sacramento), Sewer and Water Pipe. Awarded a Certificate of Merit.

The Committee do not consider it advisable to make recommendation for other than two 3rd premiums.

All of which we respectfully submit.

DAVID FARQUHARSON,
STEPHEN N. ROBERTS,
G. F. ALLARDT,
ROBERT L. HARRIS,
A. W. VON SCHMIDT.

Report of Committee.

CLASS VI.

PHILOSOPHICAL, SURGICAL, AND DENTAL INSTRUMENTS.

- 123. Warren Holt, terrestrial globe.
- 164. Lumberg & Marwedel, case of telegraphic instruments.
- 280. A. E. H. Braun, case of trusses.
- 324. John Roach, 1 transit instrument.
- 325. John Roach, 1 theodolite.
- 326. John Roach, 1 level.
- 327. John Roach, material in process of advancement.
- 333. Fairbanks & Hutchinson, 12 different kinds of scales.
- 364. V. S. W. Parkhurst, 2 of Howe's standard and 9 counter scales.
- 414. Drs. Folleau & Mabon, show case containing collection of trusses, and orthopedic instruments and surgical appliances.
- 415. Drs. Folleau & Mabon, show case of artificial legs, all invented and manufactured by exhibitors.
- 486. Mrs. M. A. Suydam, 3 patent cornea restorers.
- 505. Dr. E. Belle, patent apparatus for extracting teeth.
- 587. National Watch Co., Warren, Spadone & Hayes, agent for Pacific Coast, 6 Elgin movements, 4 cards containing different parts of the Elgin watches; 3 heavy 18-carat Elgin watches; 3 silver Elgin watches.
- 686. J. S. Phillips, portable assaying machine.
- 787. California Business University, 3 sets of telegraph instruments.

*To the President and Board of Managers of the Seventh Industrial Exhibition of the
Mechanic's Institute.*

The undersigned Committee, appointed to examine articles exhibited and competing for premiums at the above exhibition, in Class 6, do recommend the following premiums to be awarded, to wit:

686. First premium to J. S. PHILLIPS, for a Portable Assaying Machine. For convenience in use and accuracy in performance we esteem this little machine as of the greatest utility to the mining prospector, and well calculated to relieve our mining interests of the expense and uncertainty hitherto attending their development. Awarded a Gold Medal.

324. 325. 326. Second premium to JOHN ROACH, for Transit Instruments, Theodolite and Leveling Instruments. These are all well made and accurately fitted, sufficiently light to be easily carried, and yet firm enough to ensure reliability. The workmanship is a credit to the maker. Awarded a Silver Medal.

364. Second premium to V. S. W. PARKHURST, for Howe's Standard Scales. The "self-adjusting bearings" ensure an equal strain upon the knife edges while in use, and the chilled iron balls, by dispensing with the use of check rods, lessens the liability of the movement to obstruction; we think it is destined to supersede all other scales in use. Awarded a Silver Medal.

587. Second premium to National Watch Company, WARREN, SPADONE & HAYES, Agents for Elgin Watches, Movements, etc. Superior to any imported watches of the same cost. Awarded a Silver Medal.

415. Second premium to Drs. FOLLEAU & MABON, for Trusses, Orthopedic Instruments and Surgical appliances, Artificial Legs, etc. Well made and adapted to their respective uses: the legs are only inferior to the natural article. Awarded a Silver Medal.

164. Third premium to LUNDBERG & MARWEDEL, for Telegraphic Instruments. These instruments are well made and beautifully finished, fully equal in all respects to any imported. Awarded a Diploma.

333. Third premium to FAIRBANKS & HUTCHINSON, for Platform and Counter Scales. Well and accurately made. Awarded a Diploma.

280. Third premium to A. E. H. BRAUN, for trusses, well made. Awarded a Diploma.

486. Mrs. M. A. SUYDAM, patent Cornea Restorers. Awarded a Diploma.

787. California Business University, Telegraph instruments. Awarded a Certificate of Merit.

The display of articles in this class is not as great or as varied as it has been in former years; this is to be regretted, as it is a very interesting branch of mechanical business.

The Committee are unable to report on the apparatus for extracting teeth as the exhibitor was not present at their several meetings and we did not wish to experiment on our own molars.

All of which is respectfully submitted.

THOMAS TENNENT,
LUCIUS THOMPSON,
G. D. OLIVEIRA.

CLASS VII.

MANUFACTURES IN METALS.

The exhibits in this class were very extensive, and show marked advancement in these manufactures over preceding years. The mechanical industries of this particular and important branch, have been active, and developed themselves with surprising rapidity, meeting the wants of the country, and supplying almost every branch of trade and commerce.

In this age Iron among civilized nations must occupy an important position, more so as its manipulation becomes better understood, and its homogeneity more perfect.

Although possessing iron ore of great excellence, yet remoteness from the market, difficulty of access, and value of labor, render them unavailable at the present time to California, but the vast accumulation of scrap which is available for reworking and rolling, and obtainable from various points on the Pacific Coast besides San Francisco, with the requirements of the Foundries, Railroads etc., for immediate supplies of various kinds of rolled iron have justified the erection of an extensive rolling mill in this city whose exhibit of manufactured and rolled Iron, obtained for it the highest award at the hands of the managers of the Exhibition in accordance with the recommendation of the Committee on the Institute Medal.

The following statement furnished by the President and Secretary of the Pacific Rolling Mill contains interest data, showing the state of this manufacture at this date.

"The Pacific Rolling Mill Company was incorporated under the laws of the State of California May 10, 1866, and immediately entered upon the construction of the works, prosecuting the same with energy until about the 1st of July, 1868, at which time the rolls were put in operation. Of the Capital stock amounting under the charter to one million dollars, the sum of \$300,000 gold has actually been paid in, and to this permanent investment should be added whatever profits have thus far accrued in the business.

"The number of names upon our pay roll for the year ending September 30, 1869, is for the respective months as follows, Oct. 1868, 143, Nov. 149, Dec. 132, Jan. 1869, 130, Feb. 141, March 127, April 154, May 168, June 139, July 117, Aug. 110, Sept. 116, making an average of about 145 names per month, and it should be remembered that the amount of labor, is almost all of a kind demanding high intelligence and mechanical skill.

"We manufacture all kinds of Merchant Iron, Steamboat Shafts, Cranks, Pistons and Connecting Rods, Car and Locomotive Axles and frames, and Hammered Iron of every description; we have executed a large amount of Car and Bridge work for the Central Pacific. California Pacific and other railroads—have manufactured railroad bars for city railroads, and are now about to roll a quantity of heavy T rail for the Oregon Railroad. We claim in these respects to have established a solid right to the Gold Medal, if such enterprises are of service in the rapid development of the material resources of this coast.

"While the amount of our sales can be of interest in this claim of ours to the Medal, only as establishing the fact that there was a need of an institution like the

"Pacific Rolling Mill Company, we add the amounts returned to the U. S. Internal Revenue Office, as follows :

"	Quarter ending	Dec. 31, 1868	\$ 76,347.30
"	"	March 31, 1869	104,279.84
"	"	June 30, 1869	126,025.53
"	"	Sept. 30, 1869	67,548.32
"	Total for the year ending Sept. 30, 1869		\$374,200.99

"We may add as further evidence of the usefulness of this Institution the direct tendency to render valuable the iron mines of the State. We have purchased during the year ending Sept. 30, 1869, old scrap iron of various kinds, hitherto almost valueless 3,643.403 lbs.

In view of the rapid extension of railroads throughout the State it is hoped that the establishment of these works will develop paying iron mines.

Of equal importance to the State of California and adjoining territories is the establishment of works for the refining and smelting of lead ores and manufacture of lead into the various products required by the trades. These works have done more to develop lead mining on this Coast than any other means, and it is gratifying to know that it is financially a success. The raw material is furnished from the lead mines of Humboldt, Salt Lake and Colorado. Three years ago all the lead consumed here was imported, to-day we find that 30 per cent is manufactured here from the Argentiferous Galena ores of the country, and of which there is an abundance; the Humboldt ore yielding generally about 70 ounces of silver to the ton of lead; the Colorado ores yielding about one half of this amount.

The San Francisco Lead Pipe Shot Works were started in the fall of 1865, and have added from time to time various improvements, including extensive Smelting Works. From the statement of Messrs Selby & Co., the proprietors, \$400,000 capital was employed in 1868, the sales being \$300,000, which they consider light on account, of their principle furnaces being out of repair most of the year. And in the manufacturing of the lead and extracting at some of their own mines they employ over 200 men.

Other branches of manufacture in metal are carried on successfully here, and the machinery of the various foundries, machine shops, etc., are complete in every particular. About 8,674 tons of pig iron were used for various purposes during the year, and a proportionate amount of bar iron.

In the manufacture of tools, as a specialty, but one large firm is engaged, although quite a number of such interest are springing up and assuming considerable importance; the manufacture of saws of all kinds is carried on largely here, and this exhibition was surprisingly excellent, both from the great scope as well as the superiority of the articles manufactured. We extract from the statement filed with the Manager from the Pacific Saw Manufacturing Company :

"We commenced operations a little over three years ago with two men, but now keep an average of thirty-five men steadily employed. Our average monthly sales have increased from three hundred to over five thousand dollars gold, and business steadily increasing. The expense of manufacturing is somewhat greater here than in the Eastern states, but by aid of superior machinery (some of which is our own invention and manufactured in this city) we have been able to compete with the imported article to such an extent as nearly to stop the importation of first quality Circular, Mulay, Mill, Shingle, Veneer, Drag and Cross Cut Saws."

In the manufacture of brass goods, the same activity has been displayed; work of large dimensions and superior finish, including the casting of fine toned bells of 800 and 1,000 lbs. weight, cannon, etc., to supply our own requirements and those of our neighbors; one firm (W. T. Garrett), employing on an average forty men.

Report of Committee.

CLASS VII.

MANUFACTURES IN METALS.

27. Morgan Gale, fancy shoeing hammer.
28. Morgan Gale, large A tuning fork.
36. John Nestor, Portland, combined carpenter's tool for weather-boarding.
71. Misgill & Cooper, samples of California manufactured horse shoes.
111. Ephraim Vorbes, combination lock, California manufacture.
120. J. Perham, 2 stove pipe extension shelves.
140. F. T. Houghton, 2 petroleum stoves.
141. F. T. Houghton, 2 automatic clothes washers and boilers.
145. F. T. Houghton, 3 patent chopping knives.
151. John McLcod, combined latch and lock.
179. Charles Otto & Co., case of twist drills, steel squares, tools, etc.
180. Charles Otto & Co., case of brass and plated goods, California manufacture.
183. Phelps Bros., boxes of bolts and nuts, turnbuckle and seg-screws, Cal. manufacture.
208. Henry Axtell, 2 pair of Wire cutters.
214. Jacob Whitney, 2 fire lighters.
224. Ellis Ayers, 2 stoves and fixtures.

226. A. L. Stenson, Chicago, 4 Westlake patent lanterns—No. 1, tin, called the "Sun;" No. 2, heavy tin, called the "Railway King;" No. 3, brass, called the "Conductor's Pet;" No. 4, silver-plated, called the "Railway Queen."
253. American Saw Co., samples of moveable teeth, perforated and solid saws.
269. Wm. Jones, Clipper Mills, Butte county, steam pressure culinary vessels.
271. C. H. Foster, specimen of Foster's substitute for brass hinges.
329. J. B. Owens, coal oil stoves and lamps.
331. Standard Soap Co., submerged coffee pot.
335. Matthew Cook, 2 "Little Giant" cast steel blasting Wedges.
353. Gallagher, Weed & Co., whistles, gongs, hose pipes, couplings, nozzles, steam, water and gas cocks, brass hinges, rowlocks, etc., California manufacture.
385. Risdon Iron Works, 4 car wheels.
389. P. Rilcy, 2 pair of patent gas-pipe tongs.
398. M. Price, 2 cases of cutlery.
399. Joshua Gray, samples of broom, solder, piano covering and hook and eye wire.
409. F. B. Lamb, stove handle and household tool combined.
410. E. N. Robinson, tin ore, pig tin, sheet tin and tinware, from the San Jacinto Tin Mines of California.
432. Pacific Rolling Mill Co., hammered and rolled shafting, round, square and flat merchant iron, band iron, street railroad iron, horse shoe shapes, railroad axles and spikes, nuts, washers, machine and log bolts,
435. Schuester Bros., 2 Union ranges and parts.
436. J. Kindleberger and W. A. Arnold, reversible loose joint butts.
439. Carl Hintz, case of moulding tools.
440. Brittan, Holbrook & Co., stoves and fixtures, copper, tin, brass and tinned ware, and lot of Japanese ware.
443. Garvey & Kimball, steamboat and house bells, pulls, knobs, etc.
460. John Bohn, 3 stoves and fixtures.
466. Lawton & Co., milk cans.
467. San Francisco Lead, Pipe and Shot Works, pig lead, lead and tin pipe, drop shot and lead ore.
488. L. D. Herrick, Hendrickson's patent chimney top, and Herrick's sprinkler.
504. Root & Nye, chandeliers in blue and gold—gold gilt, French and English bronze, Egyptian, Gothic and Flemish styles; chandeliers with center lights, to drop one or more lights; gothic standards in bronze and gilt figures for droplights; marble ornaments; bronze figures; gilt, bronze and marble clocks.
518. Cassin & Proctor, patent funnel.
528. David Stoddart, 6 English ratchet braces.
530. David Stoddart, 5 turning tools.
533. Jonathan Kittredge, Monitor safe, with California-made lock.
534. Jonathan Kittredge, 4 fire and burglar-proof safes.
535. Jonathan Kittredge, 7 fire-proof safes, all California manufacture.
553. Will & Finck, 2 hotel annunciators.
574. W. T. Garratt, steam whistles, gongs, hose pipes, nozzles, couplings, torches, water and steam gauges; water, steam and gas cocks, globe valves, safety valves, boxes for shafting, composition nails for sheathing, sounding leads, pumps, Garratt's anti-friction metal, etc.
575. W. T. Garratt, 2 California made bells, 480 and 850 pounds weight, with frames, and wheels complete.
577. H. T. Graves, wire summer house, wire window screens, wire chairs, fenders, trellis work, sieves, riddles, coal screens, grape stemmers, meat safes, show stands, wire netting, wire cloth bird cages, patent weather strips, Cramer's patent window-lifting rods and plates.
579. J. H. Culver, improved calipers, California patent and manufacture.
635. K. Vail, 4 iron planes, Palmer's patent.
668. A. C. Taylor, slop hoppers with patent traps, patent iron sinks, patent coffee pots and dish pans, all California inventions.
672. Pacific Saw Manufacturing Co., saws, mandrels, pruning knives, reaper and mowing machine sections, currier knives, etc.
673. N. W. Spaulding, circular saws with Spaulding's patent teeth.
683. August David, 2 ice cream freezers.
732. Carrier & Winter, Howard & Thorndyke's improved mitring machine.
736. George Ruben, samples of patent sauce pan covers.
830. J. C. Hammond, Sacramento, samples of I X L metal for friction bearings and journal boxes.
838. R. F. Osborn & Co., case of cabinet hardware.
839. R. F. Osborn & Co., case of carriage hardware.
840. R. F. Osborn & Co., case of tools.
915. C. O. Bagley, window blind fastner.
916. W. A. Sublett, window fastner.
917. Lloyd & Tetlow, improved sail needle.
918. Tay, Brooks & Backus, Japanned ware.
919. G. T. Pracy, tap steel.
920. W. H. Woods, steam cylinder cock.
921. H. G. Suplee, easy threading needle for sewing machine.
849. Vulcan Iron Works, 4 car wheels, and 3 pieces chills.
917. M. L. Winn, shampooing apparatus.
928. H. Wallace Atwell, A. C. Wilson's patent metric can.

Report of Committee on Class 7.

To the Managers of the Seventh Industrial Fair of the Mechanics Institute, 1869—

GENTLEMEN: The Committee, or Judges of Award, to whom were referred the examination of Class No. 7, beg leave to make the following report:

27. MORGON GALE exhibits a fancy Shoeing Hammer, together with a Tspan Fork, both of which your Committee consider as of ordinary construction.

36. JOHN NESTOR. Combined Carpenter's Tool, for weather-boarding. A very good device, for which we would recommend a Diploma. Awarded a Diploma.

71. MISGILL & COOPER. Samples of California-manufactured Horse Shoes ; on exhibition last year.

120. J. PERHAM. Two Stove-pipe Extension Shelves, which your Committee think worthy of honorable mention. Awarded a Certificate.

140, 141, 142. F. T. HOUGHTON exhibits 2 Petroleum Stoves, 3 Patent Chopping Knives, and two Automatic Clothes Washers. From the overwhelming testimonials relative to the merits of the latter invention, your Committee would recommend a Diploma. Awarded a Diploma.

180. CHAS. OTTO & Co.* Case of Twist Drills, Steel Squares, Tools, etc., imported ; and a case of brass and plated goods, California manufacture. A Diploma of the Institute is recommended for the latter. Diploma awarded for brass and plated ware.

182. PHELPS BROS. Boxes of Bolts and Nuts, Turn-buckle and Seg-screws, California manufacture. Your Committee recommend a Silver Medal. Awarded a Silver Medal.

208. HENRY AXTELL. Two pair of Wire Cutters, very good ; a Diploma recommended. Awarded a Diploma.

226. A. L. STEMSON, Chicago, exhibits 4 Westlake Patent Lanterns, for which we would recommend a Diploma. Awarded a Diploma.

253. AMERICAN SAW Co. Samples of Moveable Teeth, Perforated and Solid Saws. A good display. Diploma recommended. Awarded a Diploma.

271. C. H. FOSTER. Substitute for Brass Hinges ; an invention of considerable merit. Diploma recommended. Awarded a Diploma.

329. J. B. OWENS. Coal Oil Stoves and Lamps ; a good display, for which we desire to make honorable mention. Awarded a Certificate of Merit.

331. STANDARD SOAP Co. Submerged Coffee Pot. Honorable mention. Awarded a Certificate.

335. MATTHEW COOKE. Two "Little Giant" cast steel Blasting Wedges—very good—a Diploma is recommended. Awarded a Diploma.

353. GALLAGHER, WEED & Co. exhibit Whistles, Gongs, Hose Pipes, Couplings, Nozzles, Steam, Water and Gas Cocks, Brass Hinges, Rowlocks, etc., California Manufacture. A good display, for which we recommend a Diploma. Awarded a Diploma.

385. RISDON IRON WORKS. Four Car Wheels. In view of the exhibitors furnishing no explanation, your Committee can only say, that they consider the wheels of very good construction.

—398. M. PRICE. Two cases of Cutlery. A very commendable display. Diploma. A Diploma is awarded.

399. JOSHUA GRAY. Samples of Broom, Solder, Piano Covering, and Hook and Eye Wire—California manufacture. A Diploma awarded.

409. F. B. LAMB. Stove Handle and Household Tool combined ; very good, for which we desire to make honorable mention. Awarded a Certificate.

432. PACIFIC ROLLING MILLS Co. exhibit Hammered and Rolled Shafting, Round, Square, and Flat Merchant Iron, Band Iron, Street Railroad Iron, Horse Shoe Shapes, Railroad Axles, and Spikes, Nuts, Washers, Machine and Log Bolts. In view of the great importance and necessity of this branch of industry to our young and growing City and State, your Committee would recommend that a Gold Medal be awarded to the Company.

NOTE.—This exhibit was awarded the Institute Gold Medal.

436. J. KINDLEBERGER AND W. A. ARNOLD. Reversible Loose Joint Butts, which invention your Committee think is worthy of honorable mention. Certificate of Merit.

439. CARL HINZ exhibits a very fine display of Moulding Tools, for which a Diploma is recommended. Awarded a Diploma.

440. BRITTAN, HOLBROOK & Co. Stoves and Fixtures, Copper, Tin, Brass and Tinned Ware, and a lot of Japanese Ware, for which we would recommend a Diploma. Awarded a Silver Medal.

NOTE.—On further examination, it was found that all the goods exhibited above (except the Stoves) were manufactured here, and were considered worthy of a Silver Medal.

443. GARVEY & KIMBALL. Steamboat and House Bells, Pulls, Knobs, etc.—fine display. Awarded a Diploma.

460. JOHN BOHN exhibits three Stoves and Fixtures, the castings of which are very nice. We recommend a Diploma. Awarded a Diploma.

—466. LAWTON & Co. make a fine display of Milk Cans.

—467. SAN FRANCISCO LEAD, PIPE AND SHOT WORKS exhibit Pig Lead, Lead and Tin Pipe, together with a large number of samples of Drop Shot and Lead Ore.

Too great an estimate cannot be placed upon this important industrial enterprise which is located in our very midst. The capacity of the works is now such that it supplies nearly the whole demand on the Pacific Coast, while the material employed is derived principally from our own mines, opening up at once a market for ores which have hitherto been considered of nominal value, except for export. The influence of this enterprise is not only beneficially felt in this city, but extends throughout the length and breadth of the whole coast. In view of which your Committee take great pleasure in recommending the Medal of the Institute. Awarded a Gold Medal.

488. L. D. HERRICK exhibits Hendrickson's Patent Chimney Top and Herrick's Sprinkler. Are both very good devices for the purpose designed, and for which your Committee desire to make honorable mention. Certificate awarded.

504. MESSRS. ROOT & NYE make a very commendable display of Chandeliers of English and Oriental Styles, ornamented in marble and bronze, of which we desire to make favorable mention. Awarded a Diploma.

518. CASSIN & PROCTOR. Improved Funnel for Liquids and Fluids. It is an ingenious substitute, and is indispensable to distillers and dealers. A Diploma is recommended. Diploma awarded.

528. DAVID STODDART places on exhibition six English Ratchet Braces and five Turning Tools, all of which are very fine, yet, your Committee do not understand that the exhibitor claims any special merit as his own, except, perhaps, upon the Turning Tools.

533, 534, 535. JONATHAN KITTREDGE. California Manufactured Safes. The fine display of California Manufactured Safes, placed on exhibition by Jonathan Kittredge, is an important and very interesting feature of the Fair, attracting much attention and commendations from all classes. The workmanship and finish of these Safes, we think, cannot be excelled, while the attempt to open one, unaided by the combination, would be very discouraging. A Gold Medal is recommended. Awarded a Gold medal.

553. WILL & FINCK show 2 Hotel Annunciators, which your Committee think worthy of a Diploma. Awarded a Diploma.

574. W. T. GARRATT. Brass Founders and Finishers' Manufactures. Much praise is due W. T. Garratt for his very fine display of Steam Whistles, Gongs, Hose Pipes, Nozzles, Steam, Water, and Gas Cocks, etc., with Garratt's Anti-friction Metal, for which a Silver Medal is awarded. Awarded a Silver Medal.

575. W. T. GARRATT also exhibits 2 California made Bells, of large weight, with frames and wheels complete, for which we recommend a Diploma. Awarded a Diploma.

577. H. T. GRAVES Wire Goods, etc. For the fine display of Wire Goods, Weather Strips, and Cramer's Patent Window Lifting Rods, made by H. T. Graves, your Committee would award a Diploma. Silver Medal awarded.

NOTE.—The fact that all the goods exhibited by Mr. Graves were made here, and of excellent manufacture, the exhibit was considered worthy of a Silver Medal.

579. J. H. CULVER. Improved Calipers. For a very useful improvement in Calipers, invented, patented, and exhibited by J. H. Culver, a Diploma is recommended. Awarded a Diploma.

635. To K. VAIL, who exhibits 4 Iron Planes, Palmer's patent, the awarding a Diploma is recommended. Awarded a Diploma.

668. A. C. TAYLOR places on exhibition his Slop Hopper, with Patent Traps, Patent Iron Sinks, Patent Coffee Pots, and Dish Pans, all California inventions, and your Committee take pleasure in recommending a Diploma for the exhibitor.

672. THE PACIFIC SAW MANUFACTURING COMPANY make a very creditable display of Saws, Mandrels, Pruning Knives, Reapers, and Mowing Machine Sections, Currier Knives, etc., for which your Committee would recommend a Gold Medal. Gold Medal awarded.

673. N. W. SPAULDING. Circular Saws, with Spaulding's Patent Teeth. The display of Circular Saws, with Spaulding's Patent Removable Teeth, exhibited by the inventor, N. W. Spaulding, your Committee deem worthy of more than a passing notice. The energy and perseverance shown by the inventor in perfecting and bringing out this useful and now almost indispensable method of inserting saw teeth, cannot be too highly praised. All good inventions like this deserve encouragement and reward, your Committee therefore would recommend that a Silver Medal be awarded to the exhibitor; not, however, for the intrinsic value of the Medal, but as a mark of appreciation for deserving genius. Awarded a Silver Medal.

683. AUGUST DAVID, exhibits 2 very good Ice Cream Freezers, for which your Committee desire to make honorable mention.

732. CURRIER & WINTER, exhibit Howard & Thorndyke's improved Mitering Machine, for which a Diploma is recommended.

736. GEORGE REUBEN. Patent Sauce-pan Covers. For samples of Patent Sauce-pan Covers, shown by George Reuben, a Diploma is recommended. Awarded a Diploma.

830. J. C. HAMMOND, of Sacramento, exhibits samples of IXL Metal for Friction.

tion Bearings and Journal Boxes, for which your Committee desire to make honorable mention.

838, 839, 840. R. F. OSBORN & Co. make a very fine display of Cabinet and Carriage Hardware, together with a case of Tools; for which your Committee desire to make honorable mention.

915. C. O. BAGLEY. Bagley's Window Blind Fastening, exhibited by C. O. Bagley, your Committee deem worthy of a Diploma. Diploma awarded.

916. W. A. SUBLETT exhibits his Window Fastening. We believe the same device was placed on exhibition last year, and a Diploma awarded at that time.

917. MESSRS. LLOYD & TETLOW, inventors, show an improved Sail Needle, whereby the easy introduction of the thread to the eye of the needle is made and grooves at each side of the needle in the heel above the eye admit the easy drawing of the thread through the fabric. A good substitute for the ordinary needle, for which we award a Diploma. Diploma awarded.

918. TAY, BROOKS & BACKUS. For the finest display of Japanned Ware, by Tay, Brooks & Backus, a Diploma is recommended. Awarded a Diploma.

919. G. T. PRACY. For 3 Bars of Tap Steel, placed on exhibition by G. T. Pracy, we desire to make honorable mention.

920. WM. H. WOODS. Steam Cylinder Cocks. For the improved method of working Steam Cylinder Cocks to Locomotives, patented by Wm. H. Woods, of this city, we desire to award a diploma. Awarded a Diploma.

921. MRS. HANNAH G. SUPPLEE exhibits her Improvement for Sewing Machine Needles. In commenting upon this invention, we believe that the open-eyed needle is not a new invention, but that many attempts have been made and essayed to provide a needle for sewing machines having for its object the easy introduction of the thread to the eye; but no one, we think, has succeeded so fully and in such a satisfactory manner in accomplishing this object as the inventress of the Supplee Needle. The perfect working of an implement having the above object in view is deemed by your Committee of incalculable benefit to the world, making the sewing machine a thing of utility to aged people, as well as to those having poor eyesight, and the want of which now almost prevents its use among those classes. Also, the great saving of time in threading the needle, by all classes of operators, is of vast importance. Full and severe tests have been made with this needle in the presence of your Committee, and many objectional questions put by us in regard to its mechanical construction have been fully and satisfactorily answered, which leaves the impression upon our minds that the invention has great merit. And your Committee would recommend that the Gold Medal of this Class be awarded to the inventress. Awarded a Silver Medal.

Mr. BOON exhibited an Open-eye Needle, but too late for competition.

WM. McKIBBIN,
CHAS. R. STEIGER,
JOHN R. SIMS,
C. W. M. SMITH,
WM. S. SNOOK.

Supplementary Report---Class VII.

NOTE.—The following Supplementary Report was received after the close of the Exhibition and too late for the recommendations of the Committee to be acted on.

For best display of assorted brass goods, consisting of Whistles, Gauges, Gauge Cocks, Stop Valves, Oil Cups, Roscoe Oilers, Steam and Water Pipe Flanges, Railroad Boxes, Shafting Bearings, and many other articles, manufactured and exhibited by WM. T. GARRATT, representing a large and valuable industry, we recommend a Silver Medal.

To WM. T. GARRATT for the best Anti-friction Metal, known as Garratt's Metal, in very general use, supported with the testimonials of careful and competent judges, as well as intrinsic qualities, as especially suited for fast speeds and heavy pressure, we recommend a Diploma.

The manufacture of Bells, combining clear and distinct tones, durability, and beauty of design, is a difficult undertaking, requiring great judgment and experience in selecting and mixing the metals, and unusual skill in moulding and casting. Two Bells on exhibition, one of eight hundred and fifty pounds, one of four hundred and fifty pounds, manufactured and mounted by Wm. T. Garratt of this city, equals in tone and finish any imported. The enterprise of William T. Garratt has stopped the importation of Bells. The number manufactured, and universal satisfaction given, is ample proof that our mechanics are not behind in this important branch of industry. We recommend a Gold Metal.

JOHN R. SIMS,
CHAS. R. STEIGER,
WM. McKIBBIN,
C. W. M. SMITH,
WM. S. SNOOK.

CLASS VIII.

WOOD AND ITS MANUFACTURES.

California produces some excellent timber, in beauty, strength, and durability, although, like any other country, it possesses considerable worthless stock. Heretofore, but little respect has been paid to this constantly-renewing source of wealth (if protected); but vandalism seems to have been rampant, and the finest timber, in many parts of the country, has fallen a victim to the woodchopper's ax, or has been burnt down to clear the land. Fortunately, the supply of timber is so abundant in some sections that the utmost recklessness of the whole population would exhaust itself before it could be destroyed entirely. The great danger, however, to be apprehended in the destruction of the Redwood trees is that the lands in the vicinity will be rendered comparatively valueless, as these trees act as condensers for the floating mists and fogs, and thus irrigate the soil.

The durability of the close-grained, hard Redwood (*Sequoia*) is surprising. Posts of this material were set in the ground in building the church at the Mission Dolores, in the year 1776, and to-day are found sound and strong. The knots of the Redwood when polished present a very beautiful surface. The Sugar-pine and Red Fir are both valuable timbers—the former, from the straightness and compactness of its grain and facility with which it is dressed, is employed much for interior work, and the latter, although hard to work, is close-grained, strong, and durable, and much in demand for heavy work.

The Laurel, of which some large sticks were on exhibition—one 48 feet long and 28 by 28 inches square—is susceptible of a very fine polish, is made extensively into veneers for paneling, etc., and considered, in point of beauty, as surpassing Rosewood, Mahogany, or Black-Walnut, being used to a large and increasing extent in the manufacture of furniture, and the crooked limbs furnish strong, and lasting knees for ship-building.

California, from its remoteness from the rest of the world, possesses species peculiar to itself—as, for instance, the Mammoth Trees (*Sequoi a Gigantea*), and the Monterey Cypress (*Cupressus Macrocarpa*). These are all being utilized by our manufacturers into almost every conceivable article usually made from wood. Tubs, pails, and all kinds of woodenware, for domestic use, are made here on an extensive scale, and the manufacturing mills (of which there are 8 in this city) find abundant work to do in working up wood into various shapes, for cornices, mouldings, etc., and for export. The Cedar from Alaska is considered exceedingly valuable for ship-building; wrecks of vessels built of the wood fifty years since are said to be found in excellent preservation. This timber grows to very large dimensions. During the year 1869 there were exported 8,320,000 feet of lumber, 289,000 laths, 3,650,000 shingles; and during the same period there was received in San Francisco, from the forests of the Pacific Slope, 242,000,000 feet of lumber.

Report of Committee---Class VIII.

54. S. P. Taylor & Co. Samples of California-made Brooms and Brushes.
83. F. Korbel & Bro. Samples of Cedar for Counter-tops, Cigar-box materials, and Back-boards for Picture Frames.
84. F. Korbel & Bro. Laurel, Rosewood, Mahogany, Spanish Cedar, Maple, and Redwood Veneers.
88. Elan & Howes. Samples of Wood and Willowware, their own manufacture.
135. S. E. & J. J. Hollister. Washing Machine and Wringer.
136. S. E. & J. J. Hollister. Model of Washing Machine.
160. Mrs. A. D. Waldron. Washing Machine.
187. D. G. Lewis. Two Washing Machines with Mangle Attachments, and two Wringers.
213. Jacob Whitney. Isabella Washing Machine.
311. Figer Bros. California-manufactured Brushes.
312. Ezra Coleman. Lot of Bootjacks.
382. E. A. Stockton. Washing Machine.
407. F. B. Lamb. Two Pioneer Washers.
444. Thomas J. Hall. Lot of Willowware.
485. I. E. Thayer. Stick of Laurel Timber, 48 feet long and 28 by 28 inches.
496. E. C. Bickford. Low's Premium Rotary Washing Machine.
559. A. Hutton & Co. Three Patent Knife-Cleaning Machines (clean 600 per hour).
586. Dewey & Co. E. F. Dewey's Patent Cutter and Can-opener.
647. M. C. Hawley & Co. Union Washing Machine.
653. Miss M. P. Carpenter. Improved Fluting Machine, California invention.
662. J. W. Wissinger. Patent Swing.
675. Frank Buckelew. California Washing Machine.
690. W. A. White. Samples of Nonconducting Iron-holders, California invention.
761. California Wine Cooperage Company (M. Fulda, Son & Co.) Mammoth Cask, 4,165 gallons.
922. F. W. Arnold. Casks, Barrels, and Kegs.
976. J. M. HORNER. Economy Washing Machine.

To the Board of Managers of the Seventh Industrial Exhibition :

Your Committee, after having examined the various articles found in Class 8, report as follows:

88. ELAM & HOWES. Woodenware. This exhibit was excellent and variety extensive; recommend the First Premium. Awarded a Gold Medal.

761. M. FULDA, SON & CO. Mammoth Cask (4,165 gallons). For the best piece of workmanship in the manufacture of Wine Casks, we recommend the Second Premium. Awarded a Silver Medal.

84. KORBEL & CO. Variety of Veneers—Rosewood, Maple, Laurel, Redwood, etc. For this exhibit, being the best in the Class, we recommend a Second Premium. Awarded a Silver Medal.

311. FIGER BROS. California-made Brushes. We recommend the Third Premium for this excellent exhibit of Brushes. Awarded a Diploma.

54. S. P. TAYLOR & CO. California-made Brooms and Brushes. The Brooms exhibited are, we think, entitled to a Third Premium. Awarded a Diploma.

382. E. A. STOCKTON. Washing Machine. Being the best exhibited, we recommend a Third Premium. Awarded a Diploma.

187. D. G. LEWIS. Washing Machine with Mangle Attachment and Wringer. We advise a Third Premium for the Mangle and Wringer. Awarded a Diploma.

213. JACOB WHITNEY. Isabella Washing Machine. Worthy of the next Premium. Awarded a Certificate.

922. F. W. ARNOLD. Casks, Barrels, and Kegs. A fine lot of Oak Barrels. Awarded a Diploma.

444. THOS. J. HALL. Willowware. Awarded a Diploma.

485. I. E. THAYER. Stick of Laurel Timber, 48 feet long, 28x28. Awarded a Diploma.

653. MISS M. P. CARPENTER. Fluting Machine. We consider it exceedingly valuable, and being her own invention, is worthy a Second Premium. Awarded a Diploma.

O. W. EASTON,
GEO. H. HALLETT,
Committee.

CLASS IX.

GLASS, POTTERY, EARTHENWARE, ETC.

Various manufactories, in connection with the interests represented in this Class, are springing up, and some assuming considerable importance. Loss from breakage, and other causes enable the manufacturer of Glass Bottles, Carboys, etc., to compete with the importer, and, as it is known, there exists in Monterey and Alameda counties an abundance of excellent sand to manufacture from, and the local demands are increasing, the prospects are favorable for an extension in this particular branch of industry. There are two Glass Works, viz.: the Pacific Glass Works, and the San Francisco Glass Works. The former was started in 1863, and has invested in the business \$160,000, turning out from \$100,000 to \$150,000 worth of ware annually, and employ from 40 to 50 hands, on the average. (Statement of agents of Pacific Glass Works.) The latter Company recently lost their works by fire, and are preparing to resume work.

The Cement manufactured by the Benicia Cement Company has obtained an excellent reputation, being considered fully equal, if not superior, to the imported. This Company manufactured during the year 1869, 20,240 barrels of Cement. Capacity of the works equals 5,000 barrels per month. The amount imported during the year was 54,677 barrels, and it is estimated that these works save annually \$70,000 to the State.

The Silvering of Mirrors is carried on quite extensively, and fine samples of this work were on exhibition.

Report of Committee---Class IX.

156. J. F. Fugazzi. Glass Neck Ties, etc.

211. John Mallon. Specimens of Ornamental Glass Cutting.

332. Son & Briggs. Case of Meerschaum Pipes.

371. M. Clark & Son, Sacramento. Lot of Stoneware.

391. Pacific Glass Co. Lot of assorted Glassware.

441. Albion Pottery. Lot of Potteryware.

550. Thomas O'Neil. Samples of Ground and Cut Glass.

573. A. S. Hallidie. Samples of Morgan's Plumbago Crucibles.

700. Wm. Reis, Salt Lake. Two samples of Porcelain manufacture from Salt Lake.

755. Haynes & Lawton. Show case of fine Chinaware.

788. S. & G. Gump. Four Pier Mirrors.
 789. S. & G. Gump. Two Mantel Mirrors.
 790. Whittier & Fuller. Large Mirror and Frame, made by Jones & Wooll.
 943. R. A. Swain. Fancy Goods and Cut Glass.
 811. Joseph Norton. Byzantine, Mosaic, and Venetian Mirrors.

Your Committee would recommend the following grade of Premiums for articles exhibited in this Class :

211. JOHN MALLON. Specimens of Ornamental Glass Cutting. A very worthy exhibit of excellent workmanship, and worthy of a Second Premium. Awarded a Silver Medal.

371. M. CLARK & SON. Stone Ware. California-made Stone Ware, from Sacramento City. Good, and entitled to Second Premium. Awarded a Silver Medal.

790. WHITTIER & FULLER. Large Mirror. This Mirror, of very large dimensions, was silvered by the exhibitors, and, as a sample of their work, is as good as anything of the kind. We recommend a Second Premium. Awarded a Silver Medal.

788, 789. S. & G. GUMP. Mirrors. Pier and Mantel Mirrors, imported, are very good, and we think entitled to a Third Premium. Awarded a Diploma.

573. A. S. HALLIDIE. Morgan's Plumbago Crucible. These are a lot of Crucibles made by the Patent Plumbago Crucible Company, London, and exhibited by their agents. Very creditable, and seemingly well made. Recommended a Third Premium. Awarded a Diploma.

391. PACIFIC GLASS WORKS. Lot of assorted Glassware. We recommend a Third Premium. Awarded a Gold Medal.

NOTE.—This was the only exhibit of California-manufactured Glassware. The display was really excellent. It has been only after a large expenditure of capital, and perseverance on the part of the Pacific Glass Works, that it has been able to compete successfully with the imported article, and, therefore, the recommendation of the Committee was carefully considered by the Board of Managers, with the result of a First Premium in this Class being awarded.

550. THOMAS O'NEIL. Samples of Ground and Cut Glass. We recommend a Third Premium. Awarded a Diploma.

755. HAYNES & LAWTON. Show Case of China Ware. For this unique exhibit of fine China Ware, we recommend a Third Premium. Awarded a Diploma.

943. R. A. SWAIN & Co. Fancy Goods and Glass Ware. We recommend a Third Premium. Awarded a Diploma.

441. ALBION POTTERY. Lot of Pottery Ware. Awarded a Diploma.

332. SON & BRIGGS. Meerschaum Pipes. Awarded a Certificate of Merit.

All of which is respectfully submitted,

S. A. SANDERSON,
 ISAAC E. DAVIS,
 AMOS CURRIER,
 Committee.

CLASS X.

MINERALS, GEOLOGICAL FORMATIONS, CHEMICAL SUBSTANCES, CHEMISTRY, OILS, SOAPS, CANDLES, DYING, DISTILLING, ETC.

The Exhibits in this Department were quite large, valuable, and varied. California, from the variety of its mineralogical productions, is an inexhaustible field for study to the scientific man, and offers enticing inducements to the capitalist and speculator. The various ores, bearing gold and silver, and of copper, lead, tin, iron, and cinnabar, are sources of wonderment from their extent and richness.

The Coal beds of Mount Diablo are improving in quality, and the quantity produced has increased in a rapid rate—the amount being in 1868, 132,537 tons; and 1869, 148,722 tons, equal to 45 per cent. of the entire consumption. Before these mines were developed coal of equal value commanded from \$25 to \$45 per ton; the present price of Mount Diablo Coal being \$9, it is estimated saves to the State at least \$5,000,000 per year.

Although some excellent Iron ores have been found in various parts of California, so far nothing of any note has been done towards developing them, except some preparatory work of the Sierra Iron Mining Company. Oregon has sent us some very fine Pig Iron from hematite ore at Oregon City, near Portland, amounting to 825 tons. It is to be hoped this may be developed successfully and with inexhaustible supply.

Lead ores of remarkable richness, bearing a considerable proportion of silver, are being worked in various parts of the State, and supply the Lead Works of this city.

Tin ores of great value are now being worked in Santa Barbara County, and the samples on exhibition were very fine.

During the year 1869 there were exported from California the following amount of ores: 69 tons Antimony, 2,400 tons Copper Ore, 72 tons Lead ore, 618 tons Silver ore, 1,541 tons Manganese, 6 tons Plumbago, and 1 ton Tin.

Each year develops some mineral species new to California, although common elsewhere. So far about 100 different species have been found and recognized on this coast, being about one-seventh of those so far known to mineralogists.

Of the manufactures included in this class, many leading articles are now being made here to profit which were heretofore imported. The seven Match Factories of this city supplied nearly all the requirements, there being 369 packages imported in 1869, against 2,102 in 1868. The Linseed Oil Works have a capacity to manufacture 25,000 gallons of oil monthly, and the excellent reputation of its oil bids fair to stop importations of this article. They also manufacture all kinds of paint, giving employment to twenty-five men.

In the manufacture of Yeast Powders, Donnelly's has an excellent reputation, fully equal to the imported. There are five makers in the city. The total amount of imports were 5,336 cases. Of that manufactured, Donnelly brands sold 4,000 gross.

Of Candle manufacturers there are three who manufactured in 1869 above 30,000 boxes. The imports being for same term 166,540 boxes. Here seems a field for enterprise, the consumption being large, especially for the underground workings in the gold and silver mines of the State, and reaching, it is estimated, 250,000 boxes per annum—the wholesale price being from 15½ to 17 cents per pound, coin.

There are some 21 makers of soap in the city, who manufactured, in the aggregate during the year, about 3,000,000 pounds. The Standard Soap Company reporting 576,000 pounds ordinary and 9,000 pounds fancy soaps, also 455,000 pounds Washing Powders. During the year 1869 there were imported 26,605 boxes.

The manufacture of Resin and Turpentine was entered into quite largely; but during the year past only 50,000 pounds Resin and 12,000 gallons Turpentine are reported as manufactured, while the imports of Resin amounted to 8,351 barrels.

The production and refining of Coal Oils have been suspended, owing to expense of transportation and other causes. Heretofore the principal supplies have been from Santa Barbara County, but it is known that large deposits of Petroleum exist in Humboldt, Mendocino, and other coast counties. The amount imported of refined oil, during the year 1869, was 1,377,810 gallons. The consumption being estimated at 1,000,000 gallons.

The vast amount of petroleum in this State, gives promise of future industries; although large expenditures have been made in attempts to develop this wealth, so far the results have not been such as to justify further immediate outlay; large districts show the presence of this material, exuding from the hill sides and ravines, or spouting up in globules to the surface of the water in the mountain streams; but as yet, they are remote from the markets, and until facilities for transportation be completed and the geology of these districts be better understood, little headway can be made in finding a profitable market. These oils are rich in excellent lubricating material, and this portion of the business is still carried on; although from the demand, the manufacture of lubricating oils from Petroleum is naturally limited.

It possesses, so far as tried, great value as a fuel under the Taylor process—for steam-boilers—the experiments made give strong hopes of its application to a considerable extent for this purpose; during the first three weeks of this exhibition, all the steam used in running the machinery was generated by it, at an expense somewhat less than Mount Diablo Coal.

Report of Committee---Class X.

33. George Pfeiffer. Large cabinet of Mineral and Geological Specimens.
43. George P. Rose. Large cabinet of Mineral Specimens.
48. Hucks & Lambert. Samples of Axle Grease.
57. J. J. Knowlton. Boxes and bottles of California Writing Ink.
61. C. J. Clark. Case of Volcanic Specimens from Hawaii.
67. S. Pillsbury & Co. Samples of Madame Balcear's Washing Fluid.
68. S. Pillsbury & Co. Samples of Parepa Rosa's Toilet Companion.
69. S. Pillsbury & Co. Samples of Liquid Laundry Blue.
75. J. G. Steele & Co. Case of Stuart's "Sun Pearl" for the complexion.
79. Hugo Mabuz. Case of Aniline Dyes.
86. Pacific Match Factory. Samples of California-made Matches.
107. A. Golsb. Samples of California-made Matches.
139. Samuel Purdy. Samples of a composition on Wire Cloth and Wood.
152. Dr. Barker. Samples of Chemical Compound for strengthening Cordage, etc.
154. J. F. Fugazzi, Sacramento. Case of Hair Dyes, Tonics, Restoratives, Pomades, etc.
165. Michael Lebetard. Samples of Russian Inflammable Balls.
166. Dana & Coddington. California-made Glue in barrels and sheets.
168. Dana & Coddington. Samples of Neats Foot Oil.
171. Charles Zwick. Caucasian Fly Glue.
185. L. R. Mills. Pacific Congress and Seltzer Water.
237. M. Howard. Hair Restorative.
239. Boyd & Co. Yeast Powder Baking Powder, Cream of Tartar and Saleratus.
249. J. Walker. Vinegar Bitters, Sapoine for the Teeth, and Cooking Extracts.
283. Edward Louis. Samples of Aromatic Water.

288. Lampe & Bro. Samples of Spanish Lustral for the Hair.
 290. G. Henter. Samples of Varnishes, Sealing Wax, Cements, etc., California manufacture.
 315. G. S. Brown, You Bet, Nevada County. Specimens of Gold-bearing Cement and Gravel.
 330. Standard Soap Co. Assorted Soaps, and samples of Chemicals incidental to the manufacture of Candles.
 857. F. L. A. Pioche. Vichy Water.
 913. Biggs & Gardner. Silver Ores from White Pine.
 359. Henry Lake. Five boxes of Patent Blacking.
 377. George Waite. Six boxes of California Magic Polish.
 390. Crane & Brigham. Case of Sulphate of Copper.
 402. B. F. Barton & Co. Samples of Soda, Saleratus, Salt, Cream of Tartar, and Yeast Powder.
 403. Parrish Soap Works. Samples of Kane's Condensed Soap, Fluids, etc.
 419. James Scrimgeour. Chilcott Soap.
 445. Prof. A. F. W. Partz. A large specimen of Partzite, a lately-discovered mineral, from Blind Springs District, California.
 477. J. G. Hatch & Co. Samples of Spanish Dressing and Blacking for Ladies' and Children's Shoes, and Dressing Blacking for Shoe Dealers and Manufacturers.
 494. Gabel & Co. Samples of Axle Grease.
 509. Pacific Oil and Lead works. Samples of Raw and Boiled Linseed Oil, Castor Oil, Linseed Oil Cake and Linseed Oil Cake Meal, Flaxseed, Castor Beans, and Metallic Paint.
 517. Sonntag & Co. (agents for Dr. Wilmar Schwabe's Homeopathic Establishment, Leipzig, Saxony). Two Show Cases of Homeopathic Medicines, Chests, and Medical Works.
 531. J. E. W. Coleman. Specimens of Oxygenated Paint.
 585. Dewey & Co. Mineral and Cabinet Specimens, Curiosities, etc.
 591. Dr. L. G. Yates, Centreville, Alameda County. Case of Geological Specimens.
 596. Dr. J. H. Wood, Napa. Case of Napa Soda.
 628. M. H. Garland. Cough Drops in Cases and Bottles.
 657. Mining and Scientific Press. Systematic Collection of Minerals, Rocks, Fossils, and Metallurgical Specimens.
 664. Challenge Soap Co. Case of Samples of Challenge Soap.
 685. D. B. Vincent. Magic Cough Cure.
 689. J. H. Warwick. Samples Sapolis.
 702. Stringer & Co. Samples of Axle Grease.
 725. Mrs. R. L. Jones, Sacramento. Patent Stamping Powder for Embroidery, Black and White.
 731. Justin Gates & Bros. Glass Case of Perfumery and Chemicals.
 743. Dr. G. H. Clapp. Chemical Washing Soap.
 757. Cordillera Mining Co. Silver Ore.
 847. Robert C. Beatie. Specimens of the Black Oxide of Manganese, from the Tide Water Manganese Mine, near San José.
 869. Thomas B. James. Quartz Specimens from White River Mining District.
 410. E. N. Robinson. Tin Oar, Pig Tin, Sheet Tin, and Tin Ware, from San Jacinto Tin Mine of California.
 897. W. F. Herrick, for Man & Brace, Chicago. Samples of Bradley's Enamel Paint.
 898. W. F. Herrick, for Lewis & Robbins, N. Y. Egyptian Disinfectant Powder.
 914. J. Simonson. Perfumery and Pharmaceutical Preparations.

To the President and Board of Managers of the Seventh Industrial Exhibition of the Mechanic's Institute, of the City of San Francisco—

GENTLEMEN: Your Committee appointed as jurors for Class 10, of articles and products, exhibited at your Industrial Fair, imbued with the desire to give prominence and encouragement to whatever can promote the scientific development and the manufactures of California, have the honor to report as follows:

On the subject of Geological formations and Minerals, the extended exhibit in your Report of the Sixth Industrial Exhibition, (see Class 11 in that Report) spares us the necessity of general repetition.

Since that date, two of the mineral resources of the State, the importance of which can not be estimated in figures, have made great progress, and their future development, as promised by their exhibitors, deserves the utmost encouragement.

410. E. N. ROBINSON. Tin Ore, Pig Tin, Sheet Tin, and Tinware, The San Jacinto Tin Co. only fairly commenced work on the mine in the Cajalco vein, in Santa Barbara County, in July, 1868, and already an elegant exhibition of Tin, Sheet Tin, Solder, and Tinwares is made. The difficulties in reducing and smelting the ores, incidental to such operations in a new country, are visibly overcome. The mine comprises 53 Tin lodes, on which \$48,500 have already been expended, and the engineer's calculation of the mass of ore shows that the mine may be considered inexhaustible. Hence, with the full expansion of this great work, the importation of foreign Tins may cease. It is easy, therefore, to calculate not only the intrinsic gain, but the collateral advantage in bringing forward Iron Works and Rolling Mills in California. Awarded a Gold Medal.

406. E. N. ROBINSON. Specimens of Roofing Slate, Flagging, etc. To utilize the extensive slate formations in Calaveras County, the same exhibitor displays Slate, shaped for roofing purposes, and other uses; also Marbled Slate, for Ornamental Mantels, Tables, etc. It may be stated, in order to show that this is not simply an Industrial Exhibition, the California Slate Company offers to contract to furnish the Slate Roofing for all the fire-proof buildings to be erected on Mare Island for the United States Government. As the quality of this Slate is very superior, and the quantity without limit, as also the economy of introducing into use the beautiful Marbled Slate in house furnishing, this industry recommends itself as worthy of being fostered by your Institute. The values and the time saved to the State in the freights on such heavy material as Slate and Marble will be great, and the marbling process a valuable new acquisition to the arts in California. To these two exhibitions we would respectfully propose the award of the Gold Medal, unless you deem that each deserves a separate award, when the Gold Medal would be to the San Jacinto Company, and the Silver Medal to the California Slate Company, of Calaveras County. Awarded a Silver Medal.

185. L. R. MILLS. The Pacific Congress and Seltzer Water;

596. DR. J. H. WOODS. Napa Soda;

857. F. L. A. POCHE. Almaden Vichy Water—

Are the only Mineral Waters of California presented at your Exhibition. All these valuable Waters are so intrinsically excellent, and yet differ so materially, that your Committee consider that it would be unjust to place them in competition. As they differ in composition, so will differ the effects in their use, and their choice, consequently, depends upon the advice under which they may be employed. Such, however, is the proved excellence of the Mineral Waters of California that the importation of foreign Mineral Waters may be dispensed with. The Committee would especially designate the admirable manner in which the Almaden Vichy Water is presented to the public use. The corking and bottling insure its quality from deterioration, and hence give it great advantage. We suggest that each exhibitor receive a Certificate of Merit. Awarded to Vichy Water, a Diploma; to Napa Soda, a Certificate of Merit; to Pacific Congress Water, a Certificate of Merit.

913. BIGGS & GARDNER. White Pine Silver Ores. We invite your special attention to the fine collection of Silver-bearing Ores, etc., of Biggs & Gardner, from White Pine, Nevada. The great distance that this weighty collection has been transported, accompanied with heavy expense, with great expenditure of time added, together with its high value in any educational institute, render it worthy of your consideration; we, therefore, recommend that, in regard to its late arrival, the rules of the Institute be waived, and that the exhibitors receive a Diploma. Awarded a Diploma.

NOTE.—This exhibit was delayed in transportation, No fault of exhibitors.

757. THE CORDILLERA MINING CO. Ruby Silver. Certificate of Worth for a fine display of a rare and costly mineral. Awarded a Certificate.

43. GEO. P. ROSE. Cabinet of minerals. The elegant collection of Geo. P. Rose having already last year received your Diploma, still merits honorable mention. Awarded a Certificate.

33. GEORGE PFEIFFER. Cabinet of Minerals. The collection of George Pfeiffer deserves commendation rather for the good model of a cabinet to contain it, than its merit and classification. Awarded a Certificate.

CHEMICALS.

57. J. J. KNOWLTON. Boxes and Bottles of California Writing Ink. A good quality of Ink, but not equal to some imported, such as Maynard & Noyes or Arnold's Writing Fluid. It is gummy. Awarded a Diploma.

79. HUGO MAHNZ. Case of Aniline Dyes. These Dyes are equal to any manufactured. Awarded a Diploma.

86. PACIFIC MATCH FACTORY. Samples of California-made Matches. A good quality of common Matches. Awarded a Certificate.

107. A. GOLSH. California-made Matches. The above is a case of Matches, Vesuvians, etc., similar to those made by Polack of Vienna. They are of excellent quality. Awarded a Diploma.

139. SAMUEL PURDY. Samples of Composition on Wire Cloth and Wood. The above appears to be a kind of Varnish.

152. DR. BARKER. Samples of a Chemical Compound for Strengthening Cordage, etc. Strengthens Cotton, Twine, etc., by causing adhesion of the fibre, as wax does.

165. MICHAEL LEBATARD. Russian Inflammable Balls. These are excellent fire-lighters, saving the danger and expense of using kerosene. Awarded a Certificate of Merit.

359. HENRY LAKE. Patent Blacking. Not equal to imported Blacking.

390. CRANE & BRIGHAM. Sulphate of Copper. The above is a lot of very handsome crystals. Awarded a Diploma.

517. SONNTAG & CO. Homeopathic Medicines. The above are neatly and compactly arranged. Unworthy of further notice.

531. I. E. W. COLEMAN. Oxygenated Paint.

689. J. H. WARWICK. Sapolis. A material for polishing metal. Answers the purpose very well.

731. JUSTIN GATES & BROS. Case of Perfumery and Chemicals. These are imported. The perfumery, Lubins. Most of the chemicals from Philadelphia.

75. J. G. STEELE & Co. Stuart's "Sun Pearl" for the complexion. A foreign article.

154. J. F. FUGAZZI. Hair Dyes, Restoratives, Pomades, etc. These preparations are more handsomely put up than any others of California manufacture on exhibition. The Pomades are not equal to those imported from France. Awarded a Certificate of Merit.

237. M. HOWARD. Hair Restorative.

249. J. WALKER. Sapoine for the Teeth.

283. EDWARD LOUIS. Aromatic Water.

288. LANPE & BROTHER. Spanish Lustrale for the Hair. Seems to be an alcoholic solution of castor oil, colored and scented.

QUACK AND PROPRIETARY MEDICINES.

249. J. WALKER. Vinegar Bitters.

628. M. H. GARLAND. Cough Drops.

685. D. B. VINCENT. Magic Cough Cure.

All Quack and Proprietary Medicines we consider beneath the dignity of the Institute to notice; and the more enticingly they are offered in the market for sale, the greater is the deception practiced on the public.

48. HUCKS & LAMBERT. Axle Grease. We recommend a Diploma. Awarded a Diploma.

166. DANA & CODDINGTON. Glue in sheets and barrels, and Neat's Foot Oil, California-manufacture. Awarded a Diploma.

290. GEORGE HEUTER. Samples of Varnish, Sealing Wax, Cements, California-manufacture. Recommend Diploma. Awarded a Diploma.

330. STANDARD SOAP Co. Assorted Soaps. Awarded a Diploma.

67. S. PILLSBURY & Co. Madame Balcear's Washing Fluid.

68. S. PILLSBURY & Co. Parepa Rosa Toilet Companiou.

69. S. PILLSBURY & Co. Liquid Laundry Blue. Awarded to Washing Fluid, a Diploma, to each other a Certificate.

We, the undersigned Committee, agree in the within report.

ARTHUR B. STOUT,
O. W. EASTON,
W. F. WHITTIER,
JAMES HOWDEN.

CLASS XI.

JEWELRY, SILVER AND PLATED WARE.

The precious metals in their unworked condition, being so abundant, have furnished ample material for the manipulation of workers in gold and silver, and the fondness of our people for this kind of jewelry and ornamentation, have created the necessary demand to keep 28 establishments of manufacturing jewelers in this city busy—giving steady employment probably to 300 men—and employing capital to the amount of about \$500,000.

In dentistry, San Francisco stands preëminent, and samples of work on exhibition, attest a great amount of skill; much attention has been paid to this kind of work by our resident dentists, of which 53 establishments are located in this city.

Considerable attention has been given to the working of hair into jewelry and artistic designs. Mrs. C. Cook, who obtained the Silver Medal, displays wonderful perfection in her manipulation and skill in the artistic designs and landscape in hair, exhibited by her, surpassing anything of the kind ever seen by the Committee; and it was upon this branch of work (Designs and Landscape in Hair) that the Committee were induced to recommend so strongly such a high reward.

The silvering of mirrors is carried on to considerable perfection, and was referred to more fully in Class 9.

Report of Committee---Class XI.

110. Dr. D. S. Hutchinson. Case of specimens of Mechanical Dentistry.
 178. George M. Wood & Co. Case of Stencils, Stock, Door Plates, Seals, etc.
 210. T. C. Jessup. Case of Operative Dentistry.
 235. John J. Joiner. Metallic Signs, and Specimens of Engraving on Metal.
 264. Mrs. C. Cook. Two cases of Hair Jewelry and Landscapes, and Device-work in Hair.
 277. Odermatt & Ettlin. Patent Fountain Pens and Drawing Instruments.
 287. George T. Casebolt. Two cases of Silver Plated Ware, for Coaches, Lamps, etc.
 489. Q. L. Adams. Specimens of Operative Dentistry.
 625. San Francisco Plate Works, case of Plated Ware, and case of Old Ware Re-plated.
 749. N. Bassett. Two Bars of Silver from 12 pounds of rock from Treasure Key Mine, White Pine District.
 756. Pacific Plate Works,* by Haynes & Lawton. Case of Gold and Silver Plated Wares.
 799. Jones & Wooll. One Mirror Plate.
 143. George W. Patch. Samples of Stencil Work.
 76. F. M. Trueworthy. Stencil Plates and Impressions.
 923. J. C. Hilton. Stencil Dies and Steel Figures.

To the President and Board of Managers of the Seventh Industrial Exhibition :

The undersigned Committee, appointed to examine articles exhibited and competing for Premiums at the above Exhibition, in Class 11, do recommend the following Premiums to be awarded, to wit :

264. MRS. C. COOK. Two cases of Hair Jewelry. We regard the goods exhibited by Mrs. Cook as one of the most beautiful features of the Exhibition—displaying artistic merit in design, and a high degree of skill in execution ; we recommend Gold Medal. Awarded Silver Medal.

756. PACIFIC PLATE WORKS, BY HAYNES & LAWTON. Case of Gold and Silver-plated Wares. The goods are elegant in design, well plated, and finely finished ; recommend First Premium. Awarded a Silver Medal.

625. SAN FRANCISCO PLATING WORKS. Case of Plated Ware, and case of Old Ware Re-plated. For Silver-plating on Old and New Ware ; recommend Second Premium. Awarded Diploma.

287. GEORGE T. CASEBOLT. Two cases of Silver-plated Ware for Coaches, Lamps, etc. Plated Carriage Trimmings, and Carriage Lamps ; recommend Second Premium. Awarded Diploma.

799. JONES & WOOL. One Mirror-plate Frame. Splendid Mirror-plate, 144 by 96 inches ; worthy of First Premium, if silvered in this city.

NOTE.—Silvering done by Whittier & Fuller, who were awarded a Silver Medal in Class 9.

235. JOHN J. JOINER. Metallic Signs and Specimens of Engraving on Metal. Very superior Metallic Signs ; recommend Second Premium. Awarded a Diploma.

178. GEORGE M. WOOD. Case of Stencils, Stock, Door-plate, Seals, etc. For fine display of Silver-plated Door-plates, Letter Seals, and small Stencil-plates ; recommend Second Premium. Awarded Diploma.

277. ODERMATT & ETLIN. Patent Fountain Pens and Drawing Instruments. The Pens are good, as Fountain Pens, but of little practical utility, owing to the sediment in the ink clogging the conducting pipe, rendering it useless.

110. DR. D. S. HUTCHINSON. Case of specimens of Mechanical Dentistry. We find in this case specimens of Mechanical Dentistry on Gold Plate, finely finished, and well constructed Vulcanite Dental Work—both apparently adapted to the use intended ; no competitors ; recommend Third Premium. Awarded Diploma.

76. F. M. TRUWORTHY. For superior Stencil-plate Work ; we recommend a Silver Medal. Awarded a Diploma.

489. Q. L. ADAMS. Specimens of Operative Dentistry. In this exhibit your Committee had no means of knowing whether the teeth were filled with gold before or after extraction. If filled before, and subjected to use, they are worthy of a Premium ; but if filled after extraction, and intended only as an advertisement, they need no further mention at our hands.

749. N. BASSETT. Two Bars of Silver from 12 pounds of rock from Treasure Key Mine, White Pine District. No novelty in this market, and as the mode of extracting the 2 bars of silver from the 12 pounds of ore is not given, we cannot award more than honorable mention.

143. GEO. W. PATCH. Samples of Stencil Work. Awarded a Certificate.

923. J. C. HILTON. Stencil-dies and Steel Figures. Awarded a Diploma.

All of which we respectfully submit, this 7th day of October, 1869.

B. R. NORTON.
 C. C. KNOWLES,
 A. J. HAIGHT,
 Committee.

CLASS XII.

THE ART OF PRINTING, PRINTING PRESSES, LITHOGRAPHY, ENGRAVING, BOOKBINDING, PAPER, TYPE, ETC.

Nearly all the Arts included in the above Class are carried on in this city. The natural tastes of the community render them a reading people, and, from the ample supply of printed material, the style of work is as much criticised as the matter. The consequences are: First, a large number of Printing Establishments to supply the requirements, and, secondly, excellence of workmanship to suit the tastes. Some very superior books are produced in San Francisco, which will compare with any part of the world, in value of contents, excellence of workmanship, and material. San Francisco, with its population of 170,000, boasts of 60 Newspapers and Periodicals, of which nine are daily, and, besides, 38 Printing Offices, 12 of which employ power presses. These give employment to about 400 printers, and have invested an aggregate capital of about \$600,000, in addition to which must be added the Newspaper Offices.

The ten Bookbinding Establishments which exist in this city employ, probably, about 100 men and women.

The manufacture of Type has been entered into quite largely, and with excellent success, having excluded the importation of that article. The honor of first casting Type in this city is due to Messrs. Faulkner, who turned out, during the first year of their operations, 30,000 pounds. There are now three foundries operating in this city, with sufficient capacity to supply present requirements of this coast, having an aggregate capital of \$100,000 invested, and employing 70 hands.

There are three Paper Mills in this State—one in Santa Cruz County (San Lorenzo Paper Mill), the second in Marin County (Pioneer Paper Mill), and the third in Santa Clara County (the Saratoga Paper Mill), which supply all the Straw Paper used, to the exclusion of the imported.

The manufacture of the Pioneer Paper Mill is best shown by their report to the Managers, as follows:

OFFICE OF THE PIONEER PAPER MILL, }
San Francisco, January 26th, 1870. }

A. S. HALLIDIE, Esq., *President Mechanics' Institute*—SIR: The business of the Pioneer Paper Mill has sympathized in the general depression of the past year, and consequently the yearly exhibit will not compare as favorably as heretofore.

The mill, however, has been kept in constant operation during the year. Its annual product has been up to the average, but at the close of the year a very large stock remained on hand. Prices have fallen very materially—of some kinds to a figure even less than New York prices.

Following is a statement of stock consumed in the manufacture of and quantity of paper manufactured:

STOCK USED IN THE MANUFACTURE.

Rags and rope (tons)	120
Lime (barrels)	190
Soda ash (pounds)	3,000
Alum (pounds)	10,000
Vitriol—sulph. acid (pounds)	500
Chloride of lime (pounds)	2,000

PAPER MANUFACTURED.

Printing	Pounds. 46,000
Colored	6,500
Manila	75,000
Wrapping	95,500
Total	223,000

Number of hands employed, 25—men and boys.

A large portion of the Manila paper has been manufactured into paper bags, by which employment is given to six more men. It gives us pleasure to observe that this branch of the trade is steadily increasing. At present the quantity of bags manufactured is about 500,000 per month, but this quantity is inadequate to the wants of trade. With a view of further increasing our facilities to keep pace with the increasing demand, we have purchased the "Morgan's Patent Bag Machines," each capable of making from 1,500,000 to 2,000,000 per month; this quantity, we think, is about the present consumption of the coast.

Very respectfully,

S. P. TAYLOR & Co.

Report of Committee---Class XII.

7. Henry White, San Mateo. Scrap-book and Journal of Travels in Asia, Africa, and America.
29. Saratoga Paper Mills, Pfister & Co., Santa Clara. Samples of Straw and Manila Paper.
53. Pioneer Paper Mills, S. P. Taylor & Co. Packages of Manila and Blue Paper, and Paper Bags.
76. F. M. Trueworthy. Stencil Plates and Impressions.
80. George B. Hitchcock. Case of Blank Books.
81. George B. Hitchcock. Letter Presses and Stands.
113. A. Hourcade. Cane made from paper.
114. E. F. Hartshorne. Washington Printing Press.
177. Taylor & Co. Specimens of Printing.
197. Bancroft & Co. Law and Miscellaneous Publications, Diaries, Blank Books, Writing Paper, Envelopes, Legal Blanks, Gold Pens, and Box for Legal Blanks.
201. Tyler Bros. Samples of Copper-plate Engraving and Printing.
227. A. L. Stemson. One of Auer's Patent Check Cutters.
231. Cubery & Co. Specimens of Printing.
297. Brown & McDowell. Specimens of Show-card Printing.
395. Mrs. James Sullivan. Box of Stamps.
458. Paul Linforth. California-made Printers' Type Cases, and Printers' Furniture.
459. Paul Linforth. Russell's Combination Case.
474. A. A. Rosenberg. Specimens of California Musical Publications.
536. Burgess & Stratton. Three Patent Musical Folios.
537. Burgess & Stratton. Four Patent Paper Files.
563. D. Hicks & Co. Case of Specimens of Bookbinding.
582. Dewey & Co., *Mining and Scientific Press, Mechanics' Fair Daily Press*, Patent Agency and Publishing Establishment, samples of Printing, Specimens of Designing and Wood Engraving, Antique Newspapers, etc.
583. Dewey & Co. Cylinder Printing Press and Printing Apparatus.
601. L. A. Gould, Santa Clara. Map of L. A. Gould's Farm.
659. P. G. Beam. Railroad Bulletin Board.
669. J. G. Crocker. Two Railroad Bulletin Boards, and two Railroad Views and advertisements.
711. W. B. Swan. Railroad Bulletin Board.
727. W. S. Jacks, Napa City. Steamer sheet of the *Alta California* for February 1, 1851, printed on silk.
729. D. Boyle. Novelty Job Printing Press.
748. Gilmore & Van Norden. Two large Advertising Frames.
777. Warren C. Butler. Frames, Specimens of Wood Engraving.
796. A. W. Stott. Case of Engraved Cards.
902. Geo. H. Baker. Thirty Lithographs.
880. G. W. Shourds. Two Frames of Wood Engravings.

To the President and Board of Managers of the Seventh Industrial Exhibition of the Mechanics' Institute, of the City of San Francisco :

The undersigned Committee, appointed to examine articles exhibited and competing for Premiums at the above Exhibition, in Class 12, do recommend the following Premiums to be awarded, to wit :

53. First Premium to PIONEER PAPER MILLS. Packages of Manila and Blue Paper, and Paper Bags. For manufacturing Colored and other varieties of Paper, awarded a Gold Medal.

29. Second Premium to SARATOGA PAPER MILLS. Samples of Straw and Manila Paper. For the manufacture of Straw Wrapping Paper, awarded a Silver Medal.

563. Second Premium to D. HICKS & Co., for best specimen of Bookbinding Awarded a Silver Medal.

583. Second Premium to DEWEY & Co., for Cylinder Press and Printing Apparatus.

231. Third Premium to CUBERY & Co, for specimens of Printing. Awarded a Diploma.

796. Third Premium to A. W. STOTT, for best Card Engraving. Awarded a Diploma.

113. Third Premium to A. HOURCADE, for Cane made from paper.

777. Third Premium to WARREN C. BUTLER for specimens of Wood Engraving.

902. Third Premium to G. H. BAKER, for exhibit of 30 Lithographs.

80, 81. Third Premium to GEORGE B. HITCHCOCK, for Letter-copying Press, and display of Books and Stationery. Awarded a Diploma.

197. Third Premium to BANCROFT & Co., for creditable exhibit of Law Blanks, Gold Pens, and other varieties of Stationery. Awarded a Diploma.

458, 459. Third Premium to PAUL LINFORTH, for California-made Printing Type Cases, and Russell's Combination Case. Awarded a Diploma.

227. Third Premium to A. L. STEMSON, for exhibit of Auer's Patent Check Cutter. Awarded a Diploma.

Fourth Premiums to the following Exhibitors:

748. GILMORE & VAN NORDEN, for 2 large Advertising Frames.

536, 537. BURGESS & STRATTON. Patent Music Folio and Paper Files. Awarded a Certificate.

7. HENRY WHITE. Traveler's Scrap Book, awarded Certificate of Merit.

JAS. MOFFITT,
JACQUES J. REY,
L. T. ZANDER,

Committee of Awards.

CLASS XIII.

LAND CONVEYANCES, AND MATERIALS AND TOOLS USED IN MANUFACTURING.

All kinds of Carriages and Wagons are manufactured in San Francisco, although California does not possess the best woods adapted to Carriage manufacture, yet it has been found cheaper to make them here than to pay the high freights on such bulky goods from the East. The consequence is that there are 50 Carriage and Wagon Manufactories in San Francisco, employing about 450 men, and, it is estimated, turned out work to the value of one and a quarter million dollars, in 1869.

The Kimball Manufacturing Company have a very large and perfect establishment, with all the facilities for manufacturing. It employs about 150 men, and turns out most excellent work, as do the other established houses, whose manufactures are preferred over the imported articles by the consumers in this State.

The extended report on the Pullman Drawing-room Car "Orleans" is interesting, from the fact that it was the *first Car* which traveled over the road from New York to San Francisco continuously by rail, arriving here the 21st of September, 1869.

Report of Committee---Class XIII.

- 173. T. R. Smith, pair of iron wagon wheels.
- 189. S. L. Pereira, Belleville buffer and bearing rail-road spring.
- 217. Paul Frieveofer, brewery wagon.
- 219. W. H. Hughes, one tire upsetter.
- 281. B. Reiley, 2 pair of adjustable tongs.
- 303. Casebolt & Kerr, one coupe.
- 304. T. G. Walters, model for coupling vehicle shafts.
- 369. Larkins & Co., end-spring buggy and side-spring buggy.
- 380. Kimball Manufacturing Co., rockaway.
- 401. Peter Portois, patent improved rail.
- 404. Geo. R. Cramer, model of dumping wagon.
- 429. Wm. M. Betts, lot of express and carriage springs, and testing machine.
- 430. A. W. Burham, 2 buggy woods.
- 455. O. F. Willey, imported turn-down phaeton, manufactured by W. D. Rogers, Philadelphia.
- 456. O. F. Willey, light buggy, by Brewster & Co., Broome street and Fifth Avenue, New York; weight, 125 pounds.
- 465. Lawton & Co., milk wagon.
- 469. Black & Miller, 1 hack and 2 top buggies.
- 524. Pickering & Davis, New York velocipede.
- 720. Pool & Carlton, double extension tire-tightening wheel.
- 837. John Craig, model of patent dump wagon.
- 842. Belduke & Sicotte, California Spring Works, lot of carriage springs.
- 925. Pulman Palace Car, Co., Drawing room Car "Orleans."
- 926. G. A. Lloyd, Metallic lining for Boxes for wagons.
- 927. S. Shirly, Improved wagon wheel.
- 928. P. Cadue, Improved wheel to wheel-barrow.
- 868. Poole & Carleton. Improved Tire-tightening Wheel.

SAN FRANCISCO, October 19, 1869.

A. S. HALLIDIE, Esq., *President Mechanics' Institute*—

Dear Sir: The undersigned, Jurors in Class No. 13, have made examination of all the articles entered for inspection, and report that there is not a great variety, nor large number of articles in competition for Premiums.

469. BLACK & MILLER. One Hack and two Top Buggies. Messrs. Miller & Black present very creditable pieces of Carriage manufacture, in one Public Hacks and two Top Buggies, for which we recommend the First Premium for Public Hacks, and also for Top Buggies. Awarded a Gold Medal.

380. **THE KIMBALL MANUFACTURING COMPANY.** California Rockaway and Carriages. The Kimball Manufacturing Company have a very excellent showing of their specialty in Carriage work, deserving more than a passing notice. The introduction of their Patent Wood Spring, some few years since, was considered by most judges of Carriage work as a doubtful improvement, if not likely to prove a positive failure, but the actual use of this kind of spring has proven that, for most uses, they have such difference in weight as to commend them to competition with all previous inventions in spring vehicles for passenger uses, from the lightest Buggies to the gay pic-nic vehicle carrying a dozen persons. Particularly are these Wagons suited to livery use, being so light as to save largely in the wear of horses. The workmanship displayed in all the vehicles shown by this company is such as to make any judge of Carriages proud of California Carriage workmen. We recommend a special Premium be awarded for a general display of vehicles at this Fair to the Kimball Manufacturing Company. Awarded a Silver Medal.

455, 456. **O. F. WILLEY & Co.** Light, Open Buggy and Turn-down Phaeton. Messrs. O. F. Willey & Co. have a light, open, or no-top Buggy, made by Messrs. Brewster & Co., of New York, which, for elegant proportions, finish, and workmanship, excels any vehicle on exhibition, and must be most carefully scrutinized to be appreciated. They also have a Turn-down Phaeton, manufactured by that "chief" of the craft, Wm. D. Rogers, of Philadelphia, which is only equaled by the Brewster Buggy for workmanship, but, being a vehicle for two purposes (for carrying two or four persons), does not, nor cannot, exhibit that elegance of proportion which a Carriage made for one purpose can be made to show. We would therefore recommend that to Messrs. O. F. Willey & Co. be awarded the First Premium for a showing of mechanical workmanship as exhibited in these two vehicles. Awarded a Silver Medal.

303. **CASEBOLT & KERR.** One Coupé. Messrs. Casebolt & Kerr exhibit one Coupé of California manufacture. A comfortable family Carriage. Nothing particularly worthy of notice.

367. **LARKINS & Co.** End and Side-spring Buggies. Messrs. Larkins & Co. have two open or no-top Buggies—one end, or elliptic spring, and one Concord-style Spring Buggies. They are the most serviceable business Wagons on exhibition, for rough city or country work, and, as such, deserve your consideration, and First Premium for no-top Buggies, side and end springs. Awarded a Silver Medal.

465. **LAWTON & Co.** Milk Wagon. Messrs. Lawton & Co. have one of the best proportioned Milk Wagons that has ever been exhibited, and shows the best of workmanship in wood and iron work and painting. We would recommend a Diploma be awarded them. Awarded a Diploma.

217. **PAUL FRIEYHOFER.** Brewery Wagon. Paul Friehofer presents an excellent piece of workmanship in a Brewery Wagon, for which we recommend a Diploma, at least. Awarded a Diploma.

837. **JOHN CRAIG.** Model of Patent Dump Wagon. John Craig presents a new kind of Dump Wagon, which we think a very decided improvement, and worthy of special notice at your hands.

404. **GEO. R. CRAMER.** Model of Dumping Wagon. George R. Cramer has also an improvement in Dump Wagons, which we most heartily recommend to those using such vehicles, for experiment, and, if practicable, or found not to clog in the gearing, that they must come into general use. We therefore commend his invention to your notice. Awarded a Certificate of Merit.

429. **WM. M. BETTS.** Lot of Express and Carriage Springs, and Testing Machine.

842. **BELDUKE & SICOTTE,** California Spring Works. Carriage Springs. Your Committee take great pleasure in reporting upon the two exhibitions of Steel Carriage Springs, made by Messrs. Belduke & Sicotte, and Wm. M. Betts, both of this city, because of the importance of establishing such manufactories on the Pacific Coast. It is quite evident that steel can be imported to San Francisco at as low a price as to New Haven, Bridgeport, Newark, and such other Eastern cities where this branch of mechanics is most successfully carried on, and we are confident that the difference in the price of skilled labor between the two sections is fully balanced by the cost of re-shipping the ready-made article from the Eastern manufactories, coupled with insurance, rust, etc., etc., leaving a fair margin for profit in this line of business in this State, thereby saving to the Pacific States large sums yearly that we now send away. And your Committee think that this enterprise deserves your most careful consideration. The workmanship displayed in the article exhibited is equal to any article ever imported to this market for sale, or in ready-made vehicles. The Springs presented for our inspection by the two different manufactories are of a character that it is difficult to give a preference to either. Messrs. Belduke & Sicotte have finished their work more carefully than Mr. Betts, but Mr. Betts presents a greater variety and more in number than Messrs. B. & S. We therefore recommend, that for the best exhibition of workmanship, the Premium be awarded to Messrs. Belduke & Sicotte; and for the best exhibition of Springs, showing the different kinds in use, in variety and quantity, that Mr. Betts receive a premium. The two establishments are of about equal capacity, employing about the same number of workmen; both establishments are in embryo, but with suitable capital and business qualifications, added to the mechanical skill

already displayed, they must grow into manufactories of great profit and importance to those interested, as well as the Pacific Coast in general. Diploma awarded to Wm. M. Betts.

430. A. W. BURNHAM. Two Buggy Woods. A. W. Burnham exhibits two Buggy Woodworks, showing exquisite workmanship and taste; for which we recommend a Diploma. Awarded a Diploma.

174. T. R. SMITH. Pair of Iron Wagon Wheels. T. R. Smith exhibits a pair of Iron Wagon Wheels, which appear to be serviceable, showing an ingenious manner for fastening the spokes to the hub. Your Committee, having no knowledge as to what work wheels of this kind have done already, cannot say more than to recommend the inventor to experiment, by which, at some future day, the value of his invention can be spoken of intelligently.

189. S. L. PEREIRA. Belleville Buffer and Bearing Railroad Spring. S. L. Pereira offers for our consideration a Railroad Spring, made of cast-steel plates with a hole in the center, round like a coffee-saucer, convexed about one-fourth of an inch, placing the edges of the plates together as if one saucer was right side up and the other a cover over it; any number of these placed in pairs one on the other, strung on a rod to keep them in place, makes a spring of any length required. This spring is so simple as to recommend its general use, and we have no doubt of its becoming a great favorite with railroad manufacturers; we recommend a Diploma. Awarded a Diploma.

219. W. H. HUGHES. Tire Upsetter. W. H. Hughes presents a Machine for Upsetting Wagon Tires, by heating them in their thinnest place and pushing the iron together, the same as if you take a roll of clay at each end and push it together—saving the necessity of cutting out a piece of the tire, and losing not only the piece cut out, but making the tire thinner by loss in melting the iron enough to make a weld. Although this principle is not new to us, we find improvements which have secured a patent for the Machine, and as practical mechanics heartily indorse it as wholly practicable and worthy of a Premium or Diploma. Awarded a Diploma.

281. B. REILEY. Adjustable Tongs. B. Reiley has two pairs of Adjustable Tongs, which are quite ingenious, and we recommend a Diploma, although we do not know in what branch of Mechanics these tongs are used to advantage. If we could see the manufacturer, we could give a better report, undoubtedly.

401. PETER PORTOIS. Patent Improved Rail. Peter Portojs has a model of Railroad Iron and Coupling, which we fail to recognize as practicable, or likely to go into general use. We would like to see him, and, if possible, to credit him with any advantages in his invention, which we have failed to discover.

524. PICKERING & DAVIS. New York Velocipede. Messrs. Pickering & Davis exhibit an Eastern-built Velocipede, of no particular merit that we can discover, either in workmanship or design.

720. POOL & CARLETON. Double Extension Tire-tightening Wheel. Messrs. Pool & Carleton have a Double Extension Tire-tightening Wheel, in which your Committee have failed to discover any practicable improvement. If the inventor can point out any improvement likely to give it general use, we will give him a hearing and subsequent report.

585. G. A. LLOYD has a Metallic Lining for inside of Pipe Boxes used in wagons, to roll on the axle, also to allow the box to roll on the lining in case it should stick to the axle. This Lining has holes in it by which the grease can be distributed on the axle and box proper. We discover, "first," that the extra lining requires a larger and more clumsy hub than if not in the box, and that the places left in all pipe boxes, or on the axle, are as much for catching grit as reservoirs for oil. We must report that we think the invention impracticable.

878. S. SHIRLEY shows a Wagon Wheel with a Screw to expand the circle of the rim of the wheel, thereby retaining the dish or strength of the wheel by filling the tire. Having no information as to any actual use of the invention, we recommend the inventor to experiment and to produce information to show its value at some future Fair, where, no doubt, an intelligent report will be given.

928. P. CADUC exhibits a Wheel made of Iron, for Wheelbarrow use, or any other, where *one wheel* is made to carry weight. It is of *undoubted value*. The spokes reach from each end of the axle to the rim or tire of the wheel, forming a brace of great strength, and your Committee commend it to all uses where only *one wheel* is used to carry a burden; we recommend a Diploma.

The above report comprises all of the articles placed before your Committee. We have given this Class a great deal of care, and most respectfully submit the same.

Respectfully, yours,

R. S. EELLS,
CHAS. H. MEAD,
JONA. KITTREDGE.

Report of Committee on Pullman Palace Car.

SAN FRANCISCO, October 19, 1869.

To the President and Managers of the Mechanics' Institute Exhibition—

GENTLEMEN: The Committee appointed by your Board to report upon the Pullman Palace Drawing-room Car beg leave to present herewith their report, which they have made especially full and explicit, as the only way of doing justice to so important and meritorious an exhibition:

The Pullman Palace Drawing-room Car "Orleans," the first Railroad Car which ever passed direct, by rail, from New York to San Francisco, arrived in this city on the 21st of September, 1869, and was next day placed on exhibition at the Pavilion of the Mechanics' Institute, in a room especially prepared for its reception.

Sleeping Cars of various designs, and affording greater or less convenience for continuous day or night travel, have been employed for many years as a portion of the regular rolling stock of several of our most important roads, where night passenger trains are run. Improvements on such cars have been made from time to time, by different individuals, and usually patented. Great inconvenience and expense were entailed upon the different Railroad Companies in securing from so many different parties the privilege of using their improvements. The different patents soon reached a large number, and there began to be a palpable necessity for a proper combination of improvements, so as to provide in a single car all the advantages which had been devised and adopted here and there by different Companies. It was upon this idea that the Pullman Palace Car Company was organized, in 1862. The Company is now running upwards of 150 Sleeping Cars, between 50 and 60 of which are of the same class and general model of construction as that of the "Orleans" Palace now on exhibition here. These cars are now run upon the night trains of over 20 of the principal railroads of the Western and Middle States, and are being gradually introduced upon the great National Road between this city and Omaha.

An inspection of the Traveling Palace, now on exhibition at the Pavilion of the Mechanics' Institute in this city, is eminently suggestive of the rapid advances which have been made in the comforts and conveniences of traveling, during the past 35 years. A Railway Carriage may be considered as made up of two distinct parts—the body and the under frame. The latter has to resist the greater part of the strains and shocks which occur during regular work, while the former has to afford accommodation and comfort to passengers during their transit, and protection in case of collision or other accident. If collisions never took place, and the bodies of Railway Carriages were merely required to carry passengers, the principles of Railway Carriage construction would be confined more especially to the production of light and airy vehicles, such as are employed on ordinary highways; indeed, such was the case in early railway traveling, and such is still the case, to quite too large an extent, on many roads, for the reason that such a policy subverses the pecuniary interests of Railroad Companies—first, by reducing the cost of construction, and, second, by reducing the cost of carrying in proportion as the weight of the vehicle is diminished.

In the construction of the Pullman Cars the only apparent efforts to secure lightness appear to be sought for in the best possible distribution of materials. The "Orleans," like all Pullman Cars of this class, is supported upon twelve chilled cast-iron wheels, grouped at each extremity, and placed under independent truck frames, each of which turns upon a main pivot, or king bolt, upon which the main body of the carriage rests. This arrangement gives great steadiness and firmness to the car, and allows of its passing the sharpest curves without twisting or straining. The nicely fitted and close jointed wood work of its elaborate interior, after much use, shows how well this object has been accomplished. A complete system of longitudinal and transverse steel springs, and india-rubber balls, diminish, as far as mechanical appliances can, the constant and severe shocks inevitably attendant upon passing over even the smoothest roads at the high speed required of "lightning express trains." The frame of the carriage, the wood work of which consist of the best ash timber, is well arranged and braced, so as to receive with the least effect the forces constantly acting upon it while in motion. The center of the car is supported by a double truss-work of iron, the lower arm of which passes along beneath the car body, while the upper one, concealed within the ceiling, reaches nearly to the bottom of the windows. The girders are strengthened laterally by heavy diagonals, cross-pieces, and verticals, also of iron, which tend to prevent any distortion, of the body which might otherwise be caused by unequal loading, heavy jolting, or buffing.

This Car is 58 feet 6 inches long, by 10 feet 4 inches wide, and 10 feet high. The exterior casing is constructed of white wood, and, up to the string course, which passes along beneath the windows, the sides are divided into narrow, vertical panels, with the name of the Car in the center. Each corner of the Car is rounded off with a curved panel. The roof is covered with tin, curved, and raised in the center, throughout its whole length, with ventilating windows on each side. The ventilation of the Car is effected by a peculiar arrangement, which takes the air in at the roof by the motion of the Car, passes it through a large tube to a chamber near one of the entrance lobbies, where it is strained of its dust by being forced through a water bath, and conveyed thence by perforated pipes to every portion of the Car. Perfect and pure ventilation is thus obtained, even when passing over the most dusty plains, or when, from other causes, it is found necessary to close the windows and doors.

All the windows are double, the sashes being filled with plate glass, so that no

draft can possibly penetrate when both sashes are closed. A more equable temperature is also thereby obtained. The spring fastenings employed for raising and holding the sashes are neat, and particularly worthy of notice. They are so contrived as to hold the window at any point desired. The design and execution of the ornamental works throughout—brackets, lamp fixtures, curtain rods, door knobs, etc.—are neat in the extreme, and all heavily plated. The sashes, window frames, doors, and whole interior wood work of the Car, are executed in black walnut. The floors have been made a special study, and are constructed double, with the intervening chambers packed with saw-dust, with the two-fold purpose of taking up the jar and sound and equanimizing the temperature. The floors are all covered with Wilton carpets.

At each end, the outer door opens into a small lobby. In one of these lobbies, and upon the left, is placed the warming apparatus, which forms an important and well devised feature. The apparatus employed is the Baker Heater, from which the heat is distributed, by means of water pipes, two of which pass the whole length of the Car, and back again to the heater, under the seats and upon either side of the Car. The water supply is from a reservoir placed just above the roof, and directly over the heater. Salt water is employed, to prevent accidents or inconveniences from freezing, and consequent bursting of pipes. In this arrangement there is no loss of water, and the apparatus will continue in order for months without any other attention than merely kindling the fires when necessary.

Next beyond the heater is a small closet, and opposite to both, on the right as you enter, is the first stateroom, containing two double beds. Passing on from the lobby, and through a folding door, first upon the left is a water-closet, with washroom and marble washstand opposite. The next apartment, also entered through a folding door, is a room nineteen feet in length, with seats upon either side, convertible, at night, into double beds. The first four seats upon either hand are arranged lengthwise of the Car; the next eight are transverse, with ample space between each pair to place a movable table, for the convenience of reading, writing, or eating, and which, when not wanted, is removed from its position and packed away. This room opens into a central lobby, upon the right of which is a linen-closet, and upon the left an open two-foot passageway, continuous along the left wall of the Car, and past what is called the Central Drawing-room, to the entrance lobby on the further extreme of the Car. Upon each side of this lobby staterooms are located, with seats convertible into double berths. In this lobby, beyond the right-hand staterooms, is located the ventilating apparatus, already described.

The central drawing-room, to which allusion has been made, can be entirely isolated from any other portion of the Car, by the passageway already described. This drawing-room contains twelve seats, which may be converted into one double and two single couches, with the same amount of sleeping accommodations above. It also contains an easy chair, fixed in one corner, and a parlor organ. In addition to the isolation of this drawing-room from the balance of the Car, it can also be divided by folding doors into what may be denominated double parlors, connected by a narrow passageway, upon one side of which is a lavatory and upon the other a closet.

The upper berths in all the rooms are hinged to the sides, over the windows, and at a convenient distance above the seats, and spring upwards and forwards until their upward and outer edge coincides with the moulding immediately beneath the center lifted roof or dome of the car—presenting something the appearance which a *mansard* roof would give to a room if sprung about midway the height of the ceiling and inclined inward at an angle of about forty degrees. Along and beneath the raised roof runs a plated rail, from which, at night, depend curtains which conceal the couches and convert the open central passage into a long narrow aisle. Lamps are suspended at intervals. Side lamps are also placed in the ceiling, between each pair of seats, but which are hidden during the day by sliding mirrored panels. During the daytime the curtains are festooned so as to form drapery to the woodwork, and give a finished and furnished air to the Car. The couches are six feet long, spring-seated, and covered with French moquet. When the hour of retiring comes, the seats, loose in their frames, are readily drawn forward, the backs fall down, the sloping ceiling above comes down with the touch of a spring, and beds, quilts and blankets, sheets, pillows, and all the paraphernalia of well-arranged sleeping apartments, are found in abundance. In a short time all are snugly stowed away in comfortable quarters for the night—the curtains are drawn, and the sweet mountain air, strained of every particle of dust or smoke, and the pleasant swinging motion of the Car, all invite balmy sleep, while the unconscious travelers are whirled forward on their journey over mountain and plain at the rate of thirty or forty miles per hour. So passes the night on a Pullman Palace Sleeping Car.

In conclusion, your Committee may add, that no expense seems to have been spared by the Company to render their cars everything which taste and ingenuity could devise for the safety and comfort of passengers. It would be difficult for the most ingenious engineering futurist to point out the direction in which any material improvement could be made to one of these Drawing-room Cars. As long as people must be confined within the walls of a car of any practicable length or breadth, we cannot see how they can be more elegantly, more comfortably, or more safely, housed than in such a vehicle as your Committee have thus endeavored to describe, and which they would recommend to the special consideration of your honorable body.

WARREN B. EWER,
DAVID FARQUHARSON,
ALBERT FOLSOM.

CLASS XIV.

LEATHER AND ITS MANUFACTURES—INDIA-RUBBER GOODS.

Dana, in his "Two Years Before the Mast," gives an account of the "hide business" in San Francisco at that early day. Since that period, the "hides" have pretty generally become transformed into "sides of leather," and to some extent, further, into harness, hose, boots and shoes. Here we are apt to say, nothing like leather, if it's of California manufacture; and the verdict is agreed in by many others than Californians.

This "interest" carried off the Institute Medal in 1868, and indicated at that time a healthful growth and prosperous expansion. Its profitableness, to some extent, has proved its ruin. The establishing of new enterprises, and consequent demand for labor, has so increased the remuneration required by the workmen that a large proportion of the manufactories of Boots and Shoes have suspended operations until some arrangements can be made, satisfactory to all concerned. There is a consequent increase in importations—much to be regretted, as it is an established fact that our home manufacturers have competed and can successfully compete with the imported article. In the manufacture of Boots and Shoes there are six large concerns engaged in this city, employing (usually) 600 men. During the present year three of these have temporarily suspended operations until satisfactory arrangements can be made as to rate of wages, etc. There are a large number of small manufacturers, all assisting to increase the total value of the productions, which, from June, 1868, to June, 1869, are estimated at near \$1,000,000. During the year 1869 there were exported 109,000 Hides, and \$50,000 in value of Leather; which, it may be safe to estimate, in the greater part returns to us manufactured into Boots, Shoes, etc. There are two local manufacturers of Hose, who supply all the requirements, and make a superior article, as proved by the many tests made by direction of the city authorities.

Report of Committee---Class XIV.

- 90. Main & Winchester. Samples of Harness, Saddles, Bridles, Bits, Whips, etc.
- 191. L. Price. Two cases of California-manufactured Boots and Shoes.
- 207. B. Falk. Frames, Mantelpiece Pockets, Watch Pockets, Card Receivers, Baskets, etc., made from Leather.
- 240. Mr. Barr, Sacramento. Six California-made Saddle-trees.
- 245. Stone & Hayden. Harness, Saddles, Collars, Whips and Whiplashes, Saddlery Hardware, and other Saddlery Wares.
- 246. Malone & McMahon. Sample of Kip and Calfskin Leather.
- 267. Mrs. Whiting. Portable Wheel Cap.
- 275. H. Behrendt & Co. California-manufactured Trunks and Valises.
- 316. George F. McDaniel, Marysville. Two Saddles and four Saddle-trees.
- 396. Lawless Bros. Lady's Saddle of California Leather.
- 421. James Scrimgeour. Patent Soles.
- 519. French & Co. Two Saratoga, one Sole-leather, and three Monitor Trunks, and three Sole-leather Valises.
- 540. Baker & Hamilton. Roll of 24-inch Leather Belting.
- 615. Broderick & Kast. Case of Ladies' California-manufactured Shoes.
- 620. Manasse & Baker, Bay View Tannery. Calf, Kip, Glove, Kid, and California Patent Leather, Pebble Goatskins, Imitation Hogskins, and Calf Kid.
- 681. J. C. Gage. Patent Adjustable Breast-collar.
- 815. F. T. Houghton, Mason's Patent Whip-hanger.
- 549. Mrs. A. D. Baker. Square Leather Frame with worsted centerpiece, two oval Leather Frames, pair of Leather Bracelets, and one Leather Frame.
- 1000. M. M. Cook & Son. Leather Belting and Hose.
- 893. Edward Galpiu & Co. Saratoga Trunks.
- 871. P. Kelly. Boots and Shoes.

To the Board of Managers Seventh Industrial Exhibition—

GENTLEMEN: The Committee appointed to examine Class 14 report the following recommendations:

90. MAIN & WINCHESTER. Harness, Whips, etc. First Premium for general excellence and greatest merit in whole Class—Harness, Saddles, Bridles, Whips, and Whip-lashes. The artistic skill displayed in the manufacture of these goods, especially the Harness for a present to U. S. Grant, defies competition, and, from the finest to the most ordinary, or Team Harness, a style of workmanship is manifested that cannot be excelled anywhere, and is conclusive evidence of the superiority of their manufacturing talent. Awarded a Gold Medal.

245. STONE & HAYDEN. Harness, Saddles, Collars, etc. Second Premium for the greatest display and superior merit in Team Collars. Awarded a Silver Medal.

1,000. M. M. COOK & SON. Belting and Hose. First Premium for Belting and Hose. Awarded a Silver Medal.

893. EDWARD GALPEN & Co. Saratoga Trunks. First Premium. Awarded a Diploma.

240. —. BARR. California-made Saddle Trees. First Premium. Awarded a Diploma.

267. MRS. WHITING. Portable Wheel Cap. First Premium for the above—her own invention. Awarded a Diploma.

275. H. BEHRENDT. Sole Leather Trunks. First Premium for best exhibit in above. Awarded a Diploma.

620. MANASSE & BAKER, Bay View Tannery. Tanned Goods. First Premium for greatest merit in whole Class. Awarded a Silver Medal.

549. MRS. A. D. BAKER. Leather Frames. First Premium for greatest merit in whole Class. Awarded a Diploma.

246. MALONE & McMAHON. Samples of Kip and Calfskin. Second Premium for Kip and Calfskin Leather. Awarded a Certificate.

207. B. FALK. Frames, Baskets, etc., of Leather. Second Premium for above exhibit. Awarded a Certificate of Merit.

396. LAWLESS BROS. Lady's Saddle of California Leather. Second Premium for Lady's Saddle. Awarded a Diploma.

Honorable mention of the following:

421. JAMES SCRIMGEOUR. Patent Soles.

519. FRENCH & Co. Trunks and Valises.

681. J. C. GAGE. Patent Adjustable Breast Collar.

815. F. T. HOUGHTON. Patent Whip Hanger (Masou's).

871. P. KELLY. Boots and Shoes. First Premium for the largest, most varied, and superior assortment of Boots and Shoes—Men's and Women's—of California make. This exhibit is most creditable to the manufacturers in every respect. Awarded a Silver Medal.

191. L. PRICE. Boots and Shoes. Second Premium for California-made Boots and Shoes—very fine quality and superior workmanship. Awarded a Diploma.

615. BRODERICK & KAST. Ladies' California-made Shoes. Third Premium for very fine exhibit of California-made Boots and Shoes. Awarded a Certificate of Merit.

All of which we respectfully submit,

W. H. BAXTER,
JAMES B. ROBERTS,
M. STRAUSS,
Committee.

CLASS XV.

FURNITURE, BILLIARD TABLES, SHOW CASES, UP-HOLSTERY, PICTURE AND MIRROR FRAMES.

The character of the exhibits in this Class was very high, demonstrating an excellence of manufacture creditable to the exhibitors, and a superiority of finish equally creditable to the manufacturers and the people whose requirements call for such skill.

The manufacturer of Furniture has several local advantages—the bulky nature of this class of goods entail heavy charges for freight, while the supply of many of the needed woods is both ample and cheap, thus enabling him to successfully compete with the importer, although, be it, the heaviest importers of Furniture are also the heaviest manufacturers.

The susceptibility of the California Laurel and the knotty part of the Redwood to a high finish has made them of great value in this industry, as well as in the shape of veneer for panels in the finish of the rooms of the wealthy. Indeed, the exhibit of Messrs. Strahle & Hughes was a marvel of beauty and wonder in the application of the polished native woods of California; and the introduction of these woods in this form, and their consequent popularity, is due to this firm and the individual efforts of Mr. J. D. Boyd. The exhibit of Messrs. Strahle & Hughes, as demonstrating the beauty and uses of our native woods, is worthy of special mention, and merits more than a passing notice. It consisted of a complete room, 19x35 feet, 15 feet high, the interior walls of which were paneled with polished Laurel wood, veneer, and occasionally the heart of the Redwood. Each panel was surrounded with a margin of Curly Maple and Buckeye, and other native woods. The wonderful beauty of the Laurel and Redwood panels was almost marvelous, and many were persuaded that the artist's pencil had been called in to complete the design. The room, or Laurel Palace, as it was called, attracted great attention from visitors, from the thorough

completeness of design and workmanship. There is but little doubt that this style of finish will become fashionable, and adopted by those who are able to indulge in this luxury.

The manufacture of articles included in this Class gives business to 36 establishments—among which are some large concerns, such as N. P. Cole & Co., Goodwin & Co., and Geo. O. Whitney & Co.—employing in the aggregate about 600 hands, with a total capital invested of about \$2,500,000.

Report of Committee---Class XV.

45. McDonald & Withers. Adjustable Window Awning.
115. E. F. Hartshorne. Patent Shade Roller.
122. Warren Holt. Samples of School Furniture, Desks, Chairs, Settees, Blackboards, etc.
124. Warren Holt. Dumb-bells, Rings, and Clubs, for calisthenic exercises.
134. F. G. Piccaroli. Carved Picture Frame.
157. J. Gerhard. Inlaid Writing Desk, the top containing 680 pieces.
158. Mrs. M. Carpenter. Indian Child's Cradle, made by an Indian woman 120 years old.
167. Dana & Coddington. Enreka and Curled Hair, in bales and bundles.
181. C. D. Hinckley. Wire Spiral Springs.
195. Crandall Patent Spring Bed Co., Sacramento. Spring Bed.
198. Henry Coms. Lady's Tea Caddy, composed of 3,305 pieces of wood and ivory.
202. Charles Gardner. Two Lady's Work Tables, California manufacture.
209. Derome & Strout. Book-case and Wash-stand, with Patent Inclosed Bed.
242. Strable & Hughes. Billiard Table, California manufacture.
243. Strable & Hughes. Laurel Palace, California manufacture.
252. Blyth & Wetherbee. Specimens of Patent Pyrographic Wood Center Tables.
278. G. W. Pilbeam. Inlaid Center Table.
299. Charles H. Jenkins. Mortised Picture Frames.
300. N. P. Cole & Co. Parlor and Library Sets, Laurel and Walnut Bedroom Sets, Center Tables, Bouquet Stands, Cabinets, Reception, Sultana, Ponceau, Ne Plus Ultra and Elizabethian Chairs, Armoire a Glace.
413. C. Romer. Old Rosewood Chamber Set, renewed by polish and varnish, sample of polishing.
446. Hibberd, Sanborn & Co. Samples of Ornamental Combination Wood Posts, Railings, Balusters, etc.
452. Kohler, Chase & Co. Three Piano Stools.
461. J. F. White. Two Bed Springs.
484. L. L. Sawyer. Improved Patent Window Shade (J. I. Tays').
490. A. Litzins. California Easy Chair, in blue silk reps.
491. Mrs. H. E. Mortou. Reception Chair.
492. Elias Miller. Inlaid Wood Box.
510. A. J. Forbes. Pet of the Boudoir.
555. George W. Clark. Sample of Paper Hangings.
564. Geo. O. Whitney & Co. Elegant Walnut Buffet Side-board, Antique Claw-foot Walnut Parlor Set upholstered in gold and silver brocade, Folding Chair in gold and silver brocade, Walnut Fire Screen in gold and silver, Rosewood Chamber Set complete, Chairs covered with green silk brocade, Walnut Parlor Writing Desk, Turkish Lounge covered with crimson and buff leather, pair of Curtains in green silk plush, heavy Cornices, fine inlaid Card or Center Table highly polished, Card Receiver in walnut.
565. Thornton Westley. Westley's Improved Bed Sofa, Improved Bed Bottom (California invention), Howe's Patent Bed Bottom.
566. Pacific Elastic Sponge Co. Samples of Spouge, Mattresses, Pillows, Church and Chair Cushions.
567. Pacific Elastic Sponge Co. Blake's Patent Chair Springs.
568. Goodwin & Co. Gilt Parlor Set, consisting of Sofa and 6 Reception Chairs, Fancy Turkish Chair, Gilt Parlor Table, Leather Reclining Chair, Library Suit in Leather, consisting of Sofa, 2 Arm Chairs, and 4 smaller Chairs; Laurel Chamber Set, consisting of Bedstead, Bureau and Glass, Washstand, and one Commode—the above are California manufacture; Rosewood Chamber Set, consisting of Bedstead, Bureau and Glass, Washstand, and Commode; Rosewood Etagere, 2 Inlaid Bonfies, and 2 Gilt Bouquet Stands.
578. H. T. Graves. Patent Spring-seat Chairs.
593. H. Wendel. Specimen of Lace Curtains, done up on elastic frames.
594. H. Wendel. Specimen of Drapery Chenille Fringe.
619. L. Castagnino. Two Specimen Tables.
634. George W. Clark. Samples of Paper Hangings and Decorations, Window Shades, etc.
648. Jacob Schreiber. Two sets of Iron Garden Furniture.
666. A. Spaulding. Patent Window Screen, sample of Pressed Wood.
763. G. W. Smith. Clock spring Shade Fixture.
798. Jones & Wooll. Gilt Mantel Mirror Frame.
851. H. H. Bancroft. Samples of Carpenter's Patent Flexible Backboard Rubbers.
911. W. T. Lucky. Picture Frame, made by a convict in Prison.

To the President and Board of Managers of the Seventh Industrial Exhibition of the Mechanics' Institute, of the City of San Francisco:

The undersigned Committee, appointed to examine articles exhibited and competing for Premiums at the above Exhibition, in Class 15, do recommend the following Premiums to be awarded, to wit:

568. First Premium to GOODWIN & Co., for best average general display of Furniture. Awarded a Gold Medal.

300. Second Premium to N. P. COLE & Co., for best display of Cabinet Work, California manufacture. Awarded a Silver Medal.

243. Second Premium to STRAHLE & HUGHES, for Laurel Palace and California Woods. Awarded a Gold Medal.

167. Second Premium to DANA & CODDINGTON, for California-manufactured Curled Hair. Awarded a Silver Medal.

490. Third Premium to A. LITZINS, for Original Design of Easy Chair, and superior Upholstery. Awarded a Diploma.

564. Third Premium to Geo. O. WHITNEY & Co., for best display of Imported Furniture. Awarded a Diploma.

619. Third Premium to LAZZARO CASTAGNINO, for California Marquetric Work. Awarded a Diploma.

484. Third Premium and Special Mention to L. L. SAWYER, for California Improved Patent Window Shade. Awarded a Certificate of Merit.

798. Third Premium to JONES & WOOL, for Gilt Mantel Mirror Frame. Awarded a Diploma.

Fourth Premiums and special mention to the following exhibitors:

198. To H. COMS, for Inlaid Tea Caddy.

209. To DEROME & STROUT, for Patent Inclosed Bed. Awarded a Diploma.

510. To A. J. FORBES, for "Pet of the Boudoir." Awarded Certificate of Merit.

648. To JACOB SCHREIBER, for best display of imported Garden Furniture, and Improved Store Stools. Awarded a Certificate.

Special Mention to the following exhibitors:

634. GEORGE W. CLARK, for display of Paper Hangings.

593. H. WENDEL, For Cleaning Lace Curtains.

JAMES W. BURNHAM, for display of Carpets, Curtains, etc. (Provided it comes within the province of this Committee.)

All of which we respectfully submit, this ninth day of October, 1869.

JACOB SCHREIBER,
GEORGE F. PARKER,
W. J. T. PALMER,
CHAS. M. PLUM,
JAMES EASTON.

NOTE.—In addition to the foregoing, there were awarded the following Premiums to exhibitors in this Class, omitted in list furnished the Committee:

491. Mrs. H. E. MORTON. Reception Chair. Awarded a Certificate of Merit.

565. THORNTON WESTLEY. Sofa-bed and Bed-bottom. Awarded a Diploma.

242. STRAHLE & HUGHES. Billiard Tables, made here. Awarded a Diploma.

252. BLYTH & WETHERBEE. Pyrographic Wood. Awarded a Diploma.

45. McDONALD & WITHERS. Adjustable Window Awning. Awarded a Diploma.

CLASS XVI.

Report of Committee---Class XVI, Section 1.

SECTION 1.

Toby Rosenthal:

1. Affection's Last Offering (exhibited by C. Kohler.)
2. The Joys and Sorrows of Spring (exhibited by Rosenthal).
3. The Exile's Return (exhibited by J. Rosenthal).

Samuel Walker:

4. Evening: Helmet Rock, near the entrance to the Golden Gate.

5. Salmon Fishing in Scotland, with Ben Nevis in the distant.
6. Portrait of Mr. Duncan.
7. Portrait of Mr. Middleton.
8. Childhood.
9. Portrait of James Parsons.
10. Portrait of a little girl.
11. The Head of a Rabbi.
12. The Head of a boy.
13. The Death of the Rabbit.
14. Gipsy Queen.

15. Venus, Cupid and Adonis: a study for a large painting.
16. Beach Scene.
17. Portrait of Samuel Walker.
18. Wreck.
19. Morning; Mount Vesuvius in the distance.
20. Water Nymph.
21. Fish Girl.
22. King Charles Spaniels after the Chase.

G. J. Denny:

23. A Race for the Prize.
24. Top Schooner in a Cyclone.
25. Wreck of the Viscata.
26. The Rescue Towing a wreck.
27. Pilot Boat No. 2 speaking the Pensacola.
28. Farralone Islands.
29. Morning in the Sierras.
30. Sunset: Golden Gate.
31. Ship "hove to" for a Pilot.

John Wilson:

32. Loch Lamond.
33. River Findhorn.
34. Afternoon.
35. Ships on fire.
36. Off Cape Horn.
37. Bothwell Castle.
38. Edinburgh.
39. Lockfine.
40. Lockgone.
41. Summer Afternoon

Mary Keller:

42. Byron.
43. A Lady (Portrait of.)
44. Cantelope.
45. Magnolia.

H. W. Severance:

46. View in the Sandwich Islands.

George H. Burgess:

47. Portrait.
48. Portrait of Adeline Patti.
49. Looking down Yosemite valley
50. On Frazer River.
51. View in Humboldt.
52. Portrait of a Lady (Pencil drawing).
53. Portrait of a Lady (Pencil drawing).
54. Study on San Antonio creek.

Robert E. Ogelby:

55. Oakland City from above Adams' point.
56. Part of the old Dungen Castle.
57. Poacher and Betrothed in Prison.
58. Lake Maggiore.
59. Scene in the Sierras.

Goodall & Nelson:

60. Propeller Monterey.
61. Tow-boat Wizard.

William Briggs:

62. Mount Tamalpais from San Quentin.
63. Minne-ha-ha.

George Peter:

64. One oil painting.

Albert M. Brooks:

65. Still Life.
66. Still Life.
67. Portrait of Colonel Larabee.

May Wentworth:

68. Potrait of a Lady.
69. Potrait of a Lady.

J. Solomon.

70. Two old oil paintings.

Jones & Wooll.

71. Valley Forge.
72. Parental Affection.

C. Bailey:

73. Mount Hulekalo, Sandwich Islands.

Miss E. Isabel Lindsey:

74. Indigene (in pastel).
75. Martha (in pastel.)
76. Mary (in pastel.)

Samuel M. Brooks:

77. Still Life, The Larder.
78. Still Life, Crab and Codfish.
79. Portrait of Dr. Geary.
80. Portrait of C. H. Larabee.
81. Portrait of Charles M. Leavy.
82. Portrait of Mrs. La Mcree.

James A. Kerr:

83. Chamois Hunter of Tyrol.
84. Fishes Just Caught.
85. Deserted Mill.
86. Near the Coast of Scotland.
87. Scenery in the South of Ireland.

Norton Bush:

88. Donner Lake,
89. Lake Tahoe.
90. Straits of Carquines.
91. Tropical Sketches.
92. Castle Peak.
93. Glimpse Tropic Land.
94. Bay of Panama,
95. American River.
96. Chagres River.

Hannah Millard:

97. Study in the Woods.
98. Otsego Lake.

F. Holtzman:

99. Harvest Scene.

Mrs. S. A. Clisly:

100. Three paintings in water colors (flowers and leaves).

Lai Yung:

101. Portrait of a Gentleman.
102. Portrait of a Lady.

O. de Bendleben:

103. Scene in Northern Alaska.
104. Summer Scene in Northern Alaska.
105. Summer Scene in Northern Alaska.

M. L. McDonald:

106. Lake Tahoe.

Miss Clara M. Root:

107. Portrait of a Young Lady, painted in China from a photograph.

W. Bolza:

108. Two oil paintings.

Helen A. Tibbets:

109. Four water-color paintings of autumn leaves.

James Lee:

110. Kosciusko's Monument at West Point

Fredrick Whymper:

111. View of Alaska (water color).
112. View of Alaska (water color).

George Howes & Co.:

113. Ship, Black Hawk.

Miss Emma Blanche:

114. In Everhart Woods—Kingstonian style.
115. On the Brandywine—Kingstonian style
116. By the Sea-Shore—Kingstonian style.
117. The Bridge Over the Creek—Kingstonian style.
118. On the Erie Canal—Kingstonian style.
119. Two Wreaths of Flowers (water colors).
120. Seven paintings—birds and flowers—executed with a poonah brush,

Charles Nahl:
359. Oil Painting, The Love Chase.
360. Oil Painting, Indian girl and calf.

P. Mezzara:
361. Two Oil Paintings, Turkish Scenes.

Lawrence Peters:
362. Two Oil Paintings (Portraits).

Samuel Brooks:
363. One Child's Portrait.

P. A. Finnegan:
364. The Florentine Mother.
365. Group of Dogs.
366. Race Horse Norfolk.
367. Race Horse Hamiltonian.

To the Board of Managers:

The undersigned Jurors, to adjudge articles on exhibition at the Seventh Industrial Fair on Class 16, Section 1, comprising Landscape, Portrait, and Marine Paintings, beg leave to report that they have made a careful and impartial examination of the class referred to them, and that the following embraces the unanimous conclusions of your said Jurors:

They regret that there is so much poverty and incompleteness in this department of the Fair, the more so because it does not fully represent the progress of the Art of Painting in this city. The good paintings on exhibition are easily recognizable. Your Jurors have found their only difficulty in a fair discrimination among exhibitors. For example, one exhibitor contributes Portraits, Landscapes, and Marine Paintings; one branch may have characteristics worthy of distinction, and yet another class may be entirely devoid of merit. We have therefore, in such cases, selected the best, and where there is no evidence of excellence, we have preferred to be silent. Take the exhibition of Class 16, Section 1, as a whole, it is a disappointment to all those who seek to encourage the cultivation of Art on this Coast.

"The Exile's Return," and the "Joys and Sorrows of Spring," by T. E. ROSENTHAL, develop many of the best elements of Painting, and are fruitful of promise of a successful career to the young Artist, especially the former of these two. To these paintings, your Jurors heartily recommend the award of the First Premium as the most worthy of the whole exhibition.

To Mr. SAMUEL M. BROOKS we recommend a Second Premium for his "Still Life" Paintings, Nos. 77 and 78.

To Mr. SAMUEL WALKER we recommend a Fourth Premium for Portraits.

To Mr. JOHN WILSON we recommend a Third Premium for Landscapes.

To Mr. ROBT. E. OGILBY we recommend a Fourth Premium for Crayon Sketches Nos. 56 and 57.

To Mr. GEO. H. BURGESS for Pencil Drawing, we recommend a Fourth Premium.

To Mr. NORTON BUSH we recommend a Fourth Premium, for Tropical Sketches, No. 91, and Bay of Panama, No. 94.

Mr. G. J. DENNY exhibits nine Paintings, eight of which are Marine. As he did not enter the Paintings at the time established by the Board of Managers, he is, under that rule, precluded from all competition for premiums. According to our construction of the rules laid down for the government of your Jurors, and as a matter of justice to punctual exhibitors, he should not have that mention that some of his pictures may be intrinsically entitled to. This rule also excludes from No. 16 to No. 22, inclusive, by S. Walker; from No. 31 to 36, inclusive, by Mr. John Wilson; No. 54, by Burgess; No. 64, by George Peter; Nos. 65, 66, and 67, by Albert M. Brooks; Nos. 71 and 72, exhibited by Messrs. Jones & Wool; Nos. 74, 75, and 76, by Miss Lindsey; No. 106, by Mr. L. M. McDonald; No. 107, by Miss Root; No. 110, by Jas. Lee; No. 113, exhibited by Geo. Howes & Co.; No. 335, by Miss Case, and No. 336, by Miss Sonenenburg, as well as two Paintings by Nahl.

The foregoing includes all the Paintings of Merit your Jurors can conscientiously recommend.

Respectfully submitted.

R. C. ROGERS,
M. B. COX,
L. HYAMS.

Jurors.

SAN FRANCISCO, November 24, 1869.

A. S. HALLIDIE, Esq., *President of Industrial Fair, etc.*—DEAR SIR: Your letter of this date, informing the undersigned, Jurors of Class 16, Section 1, that the list furnished them erroneously excluded the Paintings of Mr. G. J. Denny, as not having been entered within the prescribed time, and requesting them to furnish the Board of Managers with a supplementary report of their judgment on said Paintings, has been received. In pursuance of that request, the undersigned Jurors do hereby recommend the award of a Second Premium to Mr. G. J. Denny, for best display and excellence in Marine Painting.

2, 3. TOBY ROSENTHAL. Oil Paintings, Exile's Return, and Joys and Sorrows of Spring. Awarded a Gold Medal.

78. SAMUEL L. BROOKS. Still Life Paintings. Awarded a Silver Medal.

G. J. DENNY. Marine Oil Paintings. Awarded a Silver Medal.

SAMUEL WALKER. Portraits. Awarded a Diploma.

JOHN WILSON. Landscape. Awarded a Diploma.

56, 57. ROBERT E. OGILBY. Crayon Sketches. Awarded a Certificate.

GEO. H. BURGESS. Pencil Sketches. Awarded a Certificate.

NORTON BUSH. Tropical Sketches, Bay of Panama. Awarded a Certificate.

Respectfully submitted,

R. C. ROGERS,
M. B. COX,
L. HYAMS,
Jurors.

SECTION 2.

SCULPTURE, STAINING ON GLASS, PENMANSHIP, PHOTOGRAPHY, FINE STEEL AND WOOD EN- GRAVINGS, CHROMO LITHOGRAPHS, ETC.

Report of Committee---Class XVI, Section 2.

- 85. Locan & Co. Two cases of Bronze Statues and Ornaments, Perfumery, Albums, Work Boxes, Fancy Articles, etc.
- 212. Mallon & Boyle. Specimens of Glass Staining and Bending.
- 376. R. A. Swain & Co. Two Bronze Statuettes.
- 473. A. A. Rosenberg. Two Bronze Statues.
- 551. Thomas O'Neil. Samples of Stained and Cut Glass.
- 554. Martin L. Haas. Two show cases of Parisian Goods and Fancy Articles, and samples of Perfumery.
- 691. R. H. Rutherford. Three Photoscopes.
- 793. James Lick. Nine Ornamental Frames.
- 794. James Lick. Two Gilded Glass Plates.
- 795. James Lick. Gilded Clock Case.
- 820. D. L. Perkins, Sherman Island. Photograph of California Fruits and Vegetables.
- 826. Joseph Silver Mitchell, Sacramento. Marble Picture Frame.
- 827. Joseph Silver Mitchell. Inlaid Ivory Bodkin.
- 872. Thurnauer & Ziun. Case of Toys and Fancy Articles.

STATUARY.

Works Composed and Executed in San Francisco.

P. Mezara.

- 121. Goddess of Music.
- 122. Bust of Wm. Alvord.
- 123. Bust of Mrs. L. P.
- 124. Bust of Mrs. L. P.
- 125. Bust of von Humboldt.
- 126. Bust of Mr. Parker.
- 127. Bust of Mr. L. L. Robinson.
- 128. Group—Dead Child and Dog.
- 129. Medallion of Mrs. ———.
- 130. Medallion of Mr. A. Cazali.
- 131. Medallion of Mr. F. L. A. Pioche.
- 132. Medallion of Judge Field.
- 133. Frames of Cameos, taken from life.

Leon R. Myers & Co.

- 134. Cuordoglia.
- 135. Samuell.
- 136. Fiducia in Dio.
- 137. Resurezione.
- 138. Amonino.
- 139. Bust of Napoleon.
- 140. Hope.
- 141. Bust of Frankland.
- 142. Urns.
- 143. Psyche.
- 144. Madaline.
- 145. Preghiera.
- 146. Amorino.
- 147. Prayer.

PHOTOGRAPHS.

Photographic Views of California Scenery—Size 22x28 Inches.

Thomas Houseworth & Co.

- 148. Yosemite Falls, from the Nariposa Trail.
- 149. Cathedral Rock, 3,000 feet high, Yosemite Valley.

- 150. Lower Cathedral Rocks, 2,600 feet high, Yosemite Valley.
- 151. Yosemite Fall, 2,634 feet high.
- 152. Yosemite Fall, 2,634 feet high—front view.
- 153. Sentinel Rock, 3,270 feet high, Yosemite Valley.
- 154. Mirror Lake and Reflections, Yosemite Valley.
- 155. The Vernal Fall, 350 feet high, Yosemite Valley.
- 156. The Sentinel, 315 feet high, Big Trees, Calaveras Grove, California.
- 157. The Original Big Tree, 32 feet diameter, Calaveras Grove, California.
- 158. The fallen Tree Hereules, 325 feet long, Calaveras Grove, California.

Oriental—Size, 22x28 Inches.

- 159. Harbor of Nagasaki, Japan.
- 160. The Bund, Nagasaki, Japan.
- 161. View near Nagasaki, Japan.
- 162. Panorama of Yokobama, Japan.
- 163. Field View near Yokohama, Japan.
- 164. Temple in Tycoon's Burial Ground, Yeddo, Japan.

Oriental—Size, 16x20 Inches.

- 165. View in Ka-ding, 30 miles from Shanghai, China.
- 166. The Stone Pagodas, Loo Choo, China.
- 167. The Pagoda at Loong Koong, General Ward's City, China.
- 168. Temple in the Grand Cemal at Woosuh.

Stereoscopic and Album Views—China.

- 169. One Frame, 30 Photographs, Pacific Railroad Views; Views of Principal Buildings in San Francisco.
- 170. One Frame, 30 Photographs, Hydrantie, Placer, and Quartz Mining Views; Views of Lake Tahoe, Big Trees, Yosemite, Chinese and China.
- 171. One Frame, 12 Photographs of the Eclipse of August 7, 1869.

William Shew.

- 172. Plain Photograph of Hon. E. Casserly.
- 173. Retouched Photograph of Hon. John Conness.
- 174. Retouched Photograph of Hon. D. Broderick.
- 175. Colored Photograph of Hon. T. H. Selby.
- 176. Retouched Photograph of Dr. Bellows.
- 177. Retouched Photograph of Thos. Starr King.
- 178. Retouched Photograph of General Sumner.
- 179. Retouched Photograph of General John A. Sutter.
- 180. Colored Photograph of General McClellan.
- 181. Retouched Photograph of Judge Field.
- 182. Retouched Photograph of Rev. Mr. Wyatt.
- 183. Colored Photograph of Miss Bateman.
- 184. Colored Photograph of Miss Annette Luce.
- 185. Colored Photograph of Miss Weston.
- 186. Colored Photograph of Miss Alice Kingsbury.
- 187. Eight Colored Photographs of Ladies and Gentlemen.
- 188. Eight Ivorytypes of Ladies and Gentlemen.
- 189. Five Frames of Small Cards.
- 190. Four Frames of Cabinet Cards.

C. E. Watkins.

- 191. North Dome, Yosemite Valley.
- 192. Mount Starr King, Yosemite Valley.
- 193. El Capitan, Yosemite Valley.
- 194. Grizzly Giant, Mariposa Grove.
- 195. Section Grizzly Giant, Mariposa Grove.
- 196. Washington Column, Yosemite Valley.
- 197. Mirror Lake, Yosemite Valley.
- 198. Cape Horn, Columbia River, Oregon.
- 199. Falls, Columbia River, Oregon.
- 200. Falls, Columbia River, Oregon.
- 201. The Sentinel, Yosemite Valley.
- 202. Cathedral Rocks, Yosemite Valley.
- 203. Pomompiares, Yosemite.
- 204. The Cathedral Rocks, from the Valley Bend, Yosemite Valley.
- 205. The Dome, Royal Arch, Washington Column.
- 206. Castle Rock, Columbia River, Oregon.
- 207. Scene on the Columbia River, Oregon.
- 208. Scene on the Columbia River, Oregon.
- 209. Cape Horn, Columbia River, Oregon.
- 210. Yosemite Valley, from Mariposa Trail.
- 211. Pohono, Bridal Veil, Yosemite Valley.
- 212. Mirror View of North Dome.
- 213. Tassayac, The Half Dome, Yosemite Valley.
- 214. The Garrison, Cascades, Columbia River, Oregon.
- 215. Rooster Rock, Columbia River, Oregon.

- 216. Eagle Creek, Cascades, Columbia River, Oregon.
- 217. Cape Horn, Columbia River, Oregon.
- 218. View down the Valley Yosemite.
- 212. The Yosemite Valley from Inspiration Point.
- 220. The Vernal and Nevada Fall, Yosemite Valley.
- 221. The Tooth Bridge, Cascades, Columbia River, Oregon.
- 222. The passage of the Dalles, Columbia River, Oregon.
- 223. Mount Hood and the Dalles.
- 224. First View of the Mine, New Almaden.
- 225. The Hacienda, New Almaden.
- 226. Islands in the Columbia Cascades.
- 227. Mount Hood, from near Vancouver, Columbia River.
- 228. The Rapids, Cascades, Columbia River, Oregon.
- 229. Upper Cascades, Columbia River, Oregon.
- 230. Albums, etc.

Photographs Retouched in Oil, Life Size.

- Vaughn.
- 231. Judge Hastings.
- 232. Mr. Gashwilder.
- 233. Mr. Mosheinner.
- 234. Mr. Lockhead and lady.
- 235. Mr. Vaughn.
- 236. Four Life-size Photographs, retouched with India ink.
- 237. Twelve Half Life-size Photographs, retouched with water colors.
- 238. Two Ivorytypes.
- 239. Two Sun Pearls.
- 240. One Miniature on Porcelain.
- 241. Crayon of Child Kissing Reflection in Mirror.
- 243. Eagle Base-Ball Club (cards).

Bradley & Rulofson.

- 244. One Large Portrait of Miss Pidwell, in water colors.
- 245. Group of 9—The Oxford Crew in the play of Formosa, in water colors.
- 246. Group of 5—Captain and Officers of City Guard, in water colors.
- 247. Group of 4—Misses DeRo and Klinkenstein, in water colors.
- 248. Group of 3—Misses Chapman and Trask, in water colors.
- 249. Portrait of Miss Taylor, in water color.
- 250. Portrait of Miss Houston, in water color.
- 251. Portrait of Mrs. Howish.
- 252. Portrait of Mrs. Rogers (Charlotte Thompson), in ink.

Portraits after Rembrandt.

- 253. Portrait of Miss Hatch.
- 254. Portrait of Mrs. Dr. Howard.
- 255. Portrait of Mr. F. Marriott.
- 256. Portrait of Miss Emily Melville.

Portraits in Ink.

- 257. Captain Foster.
- 258. Captain Eldridge.
- 259. I. Friedlander.
- 260. Martin Tidball.
- 261. Captain Cavarly.
- 262. Mr. Bullock.
- 263. Two frames Rembrandt and Marin Photographs.
- 264. Two frames Rustic Cabinet Photographs.
- 265. Eight frames Rustic and Plain Cartes de Visite.
- 266. Twenty-four Sun Pearls.
- 267. Group of 13—Chinese Embassay with Burlingame.
- 268. Group of 15—Officers of Templar Lodge, I. O. O. F.
- 269. Three Family Groups, Rustic; 9 Cabinet Photographs, framed; Showcase containing Rembrandts, Cabinets, 30 Sun Pearls, and Miss Tucker on Clock Dial, etc.

Dr. J. H. Wood.

- 270. Two Photographic Views of Napa Soda Springs.

George G. W. Morgan.

- 271. One Photograph, Capitol at Washington.
- 272. One Photograph, Frescoes of Dome of Capitol at Washington.

Mrs. M. H. Litchman.

- 273. Photograph, retouched in Oil.

Bayley & Winter.

- 274. Nineteen Photographs from line engravings:
- 275. 1 To the Crimean War.
- 276. 2 The Game-keeper's Daughter.
- 277. 3 Shakespeare's Courtship.
- 278. 4 A Piper and a Pair of Nut-crackers.

- 279. 5 Christ Weeping over Jerusalem.
- 280. 6 Sheep Shearing.
- 281. 7 Sheep Washing.
- 282. 8 Many Happy Returns of the Day.
- 283. 9 The Departure.
- 284. 10 First Lesson.
- 285. 11 The Return.
- 286. 12 The Saved.
- 287. 13 Picking Out the Lambs.
- 288. 14 Sheep to Market.
- 289. 15 Returning from Hawking.
- 290. 16 The Prison Window.
- 291. 17 The Emigrant's Letter.
- 292. 18 Shoeing.
- 293. 19 The Return Home from the Crimea War.

Four large Photographs in India Ink :

- 294. Thomas Maguire.
- 295. Mr. Dusenberry.
- 296. Mrs. Hunter.
- 297. Daniel Gorham.

Seven large Oleographs (new style):

- 298. R. Winter.
- 299. W. F. Bayley.
- 300. M. Vanderslice.
- 301. Mr. Mansell.
- 302. Senator Carl Shurz.
- 303. Mr. Davenport.
- 304. Miss Annie Pierce.
- 305. Three Square Pictures, Groups, of the National Guard.
- 306. Two Square Pictures.
- 307. Mrs. Bowers as Queen Elizabeth (new style).
- 308. Miss Jones (water Colors).
- 309. Two 16x20 Plain Photographs.
- 310. Señor DeVivo.
- 311. Señor Mancusi.
- 312. Twelve 13x16 Oleographs.
- 313. Four 13x16 Plain Photographs.
- 314. Seventeen 8x10 Plain Photographs.
- 315. Eighteen Cabinet Cards.
- 316. Thirteen Porcelain Pictures.
- 317. Four frames, containing various Cartes-de-visites.

PENMANSHIP.

- J. P. Dwyers.
- 318. Specimens.
California Business University.
- 319. Four Frames of Penmanship.
Miss E. M. Horne.
- 320. One Pen Drawing.
D. C. Taylor.
- 321. Two Frames of Penmanship.
- 322. Two Pen Drawings.
L. W. Ford.
- 323. One Specimen of Penmanship.
Pacific Business College.
- 324. Seven Frames, Specimens of Penmanship and Drawing.

ARCHITECTURAL DRAWING.

- R. M. Williams.
- 325. One Architectural Drawing.
J. E. Wolfe.
- 326. Mayfield Chapel.
- 327. Mr. Lambert's House at Hayes Valley.
- 328. Residence of H. H. Bancroft.
- 329. Front View of Second Baptist Church.
- 330. Elevation Third Story.
- 331. Side Elevation.
- 332. Church Elevation.
- 332. Chapel Elevation.

CRAYON AND PENCIL DRAWING.

- Miss Ella Robinson.
- 333. Drawing of California as it was supposed to be in 1605.
E. T. Dudley.
- 334. One Crayon Drawing.

Miss Effie Case.

335. One Crayon Drawing.

Cecilia Sonenenberg.

336. One Crayon Drawing, Moonlight Scene.

ENGRAVINGS.

David Saxton.

337. One Steel Engraving, The Burial of Letano.

Mrs. H. S. Huntington.

338. One Medley Picture.

PHOTOGRAPHS EXHIBITED BY N. M. KLAIN.

339. Synagogue on Mason Street.

340. Synagogue Emanu-El, Sutter Street.

341. Merchants' Exchange, California Street.

342. Russ House, Montgomery Street.

343. Parker's Monument in Odd Fellows' Cemetery.

344. Several Monuments in Lone Mountain Cemetery.

345. Murphy, Grant & Co.'s Building, corner Sansome and Bush streets.

346. Pleasure Yacht of Eugene Kelly.

347. Black Point.

348. Presidio.

349. Angel Island.

350. Angel Island Hospital.

351. Oriental Block.

352. Residence of N. P. Cole, Pine Street.

353. Residence of Mr. Pickering, Bush Street.

354. Residence of Col. Taylor, Bush Street.

355. Residence of James Laidley.

356. Residence of Mr. Lambert, Hayes Valley.

357. Residence of Mr. T. P. Pierce.

358. Kittredge & Leavitt's Pioneer Iron Works.

To the President and Board of Managers of the Seventh Industrial Exhibition of the Mechanics' Institute, of the City of San Francisco :

The undersigned Committee, appointed to examine articles exhibited and competing for Premiums in the above Exhibition, in Class 16, Section 2, do recommend the following :

121 to 133. First Premium to P. MEZZARA, for artistic merit in Statuary, executed in San Francisco. We recommend the work of this artist for the First Premium, not alone for its intrinsic merit, but also for its effect in establishing on this coast a base for the development of this particular branch of art. Awarded a Gold Medal.

324. Second Premium to FULGENZIO SEREGNI, for superior execution in all branches pertaining to Penmanship, exhibited by the Pacific Business College. Awarded a Silver Medal.

493. Second Premium to JAMES LICK, for uncommon skill in manufacture of Ornamental Frames, Clock Case, and Gilded Glass Plates. Awarded Silver Medal.

319. Third Premium to CALIFORNIA BUSINESS UNIVERSITY, for the fine exhibit of Practical Commercial Penmanship. Awarded a Diploma.

212. Third Premium to MALLON & BOYLE, for the best and purest Glass Staining. Awarded a Diploma.

326 to 332. Third Premium to I. E. WOLFE, for a large and creditable display of Architectural Drawings. Awarded a Diploma.

338. Third Premium to Mrs. H. S. HUNTINGTON, for one Medley Picture, the conception of which being both artistical and tasteful. Awarded a Diploma.

826. Third Premium to JOSEPH SILVER MITCHELL, for a carefully executed Marble Frame. Awarded a Diploma.

Fourth Premiums to the following exhibitors :

376. R. A. SWAIN & Co. Bronze Statuettes.

85. LOCAN & Co. Bronze Statues and Fancy Goods.

473. A. A. ROSENBERG. Bronze Statues.

554. MARTIN L. HAAS. Fancy Articles.

Your Committee wish to make special mention of the beautiful display of Photographs of all descriptions exhibited by Messrs. Bailey & Winter, Bradley & Rulofson, Watkins, Vaughan, Wm. Shew, Klain, Morgan, and others.

All of which we respectfully submit, this twenty-fifth day of October, 1869.

FRED'K MANSELL,
JACQUES J. REY,
Committee.

SECTION 3.

SIGN PAINTING, LETTERING, ORNAMENTATIONS IN OIL AND WATER COLORS, SCENIC PAINTING, STAINING ON WOOD, GRAINING, ETC.

Report of Committee---Class XVI, Section 3.

- 255. B. J. DeWolf. Ornamental Sign.
- 287. Jas. W. Luny (13 years old). Ornamental Sign on Glass.
- 349. George A. Brush. Imitation of a California Laurel Door.
- 350. George A. Brush. Imitation of a Black Walnut Door.
- 378. Noble & Gallagher. Ornamental Sign.
- 379. Noble & Gallagher. Four Ornamental Glass Letters and Glass Sign.
- 471. John W. Cherry. Specimens of Sign Painting on Glass.
- 560. D. Levy. Ornamental Sign.
- 723. Louis Tomskey. Specimen Ornamental Sign Painting.
- 806. F. Pellegeine. Samples of Fresco Painting.
- 903. Sweett & Gadsby. Plain and Ornamental Sign Painting.

To the President and Board of Managers of the Seventh Industrial Exhibition of the Mechanics' Institute, of the City of San Francisco :

The undersigned Committee, appointed to examine articles exhibited and competing for Premiums at the above Exhibition, in Class 16, Section 3, do recommend the following Premiums to be awarded, to wit :

349. First Premium to GEO. A. BRUSH for best Imitations of Black Walnut, Oak, and California Laurel. Awarded a Gold Medal.

471. Second Premium to JOHN W. CHERRY for best Gold Lettering on Glass. Awarded a Silver Medal.

378, 379. Second Premium to NOBLE & GALLAGHER, for Embossed, Enameled, and Ornamental Gilding on Glass ; also, Ornamental Sign with Scrollwork, Figures, etc. Awarded a Silver Medal.

Second Premium to SWEETT & GADSBY, for imitation of Marbling and Graining. Awarded a Diploma.

723. LOUIS TOMSKY contributes an excellent Gold Sign on Glass, sent in, however, too late for competition.

289. JAMES W. LUNY (13 years old), makes, for one so young, a creditable display of Lettering on Glass. Awarded a Certificate of Merit.

All of which we respectfully submit, this 9th day of October, 1869.

JAMES R. DEANE,
FRED'K MANSELL,
R. WUNDERLICH,
Committee.

SECTION 4.

WAX WORK, HAIR WORK, BEAD AND MOSS WORK, ARTIFICIAL FLOWERS, ETC.

Report of Committee---Class XVI, Section 4.

- 19. Mrs. W. S. Chandler. Specimens of Wax Work, done by Indians in Mexico.
- 55. Miss Kate Mitchell. Picture and Frame made from California leaves and flowers.
- 97. Mrs. S. A. Sanderson. Specimens of Moss Work.
- 104. D. Denechand. Artificial Garden.
- 147. Miss Emma Blacke. Wax Work, Cross and Wreath.
- 173. Mrs. F. B. Medina. Two Shell Wreaths.
- 204. Miss Nellie Welty. Four pieces of Bead Work.
- 206. Miss Mary Pennie. Wreath of California Poison Oak.
- 236. Mrs. A. D. Young. Embroidered Picture made with Pins.
- 302. Wm. Johnson. Wreath of Wild Flowers in Frame.
- 212. Mrs. M. E. Doherty. Two cases of Human Hair and Perfume.
- 346. Miss G. Coffin. Wreath of Sea Moss from Alaska.
- 497. Mrs. H. W. Bennet. Bridal Bouquet of Wax Flowers, 1 Cross (of Wax), large Bouquet of Wax Flowers (in frame), Bouquet and Wreath of Antumu Leaves (in Wax).
- 500. Mrs. Benjamin Haynes. Case of Wax Fruit.
- 556. Mrs. Benj. Haynes. Case of Pond Lilies (Wax).
- 722. H. Kahn. Showcase of Artificial Flowers.
- 728. Mrs. P. A. Duncan. Hair Wreath.

738. Mrs. J. B. Levet. Basket of Wax Flowers.
 740. Mrs. W. J. Silver. Shell Cottage.
 764. G. Holea. Basket of Wax Flowers.
 781. Mrs. George Ellis. Wreath of Santa Cruz Moss.
 786. Miss Winifred White. Picture of Sea Moss in Oval Gilt Frame.
 792. Mrs. Swanton. Five Frames of Moss and Shell Work.
 797. Mrs. Richard Brown. Frame of Skeleton Leaves.
 800. Mrs. Robert Taylor. Frame of California Dried Flowers.
 803. Mrs. John J. Daggett. Four Shell Frames.
 804. Miss N. Reynolds. Frame of Wax Flowers.
 807. Mrs. Benj. Haynes. Three Frames of Wax Flowers.
 808. Mrs. Benjamin Haynes. Frame of Moss Work.
 809. Mrs. E. Tracy. Two Frames of Bead Work.
 810. Miss N. Reynolds. Hair Wreath in Frame.
 813. Miss E. Tracy. Two Bead-embroidered Pictures in Blue and Gold—No. 813, Night, and No. 814, Morning.
 833. Miss Florence Rumsey. Shell and Moss Wreath in Frame.
 845. Mrs. W. J. Davis. Moss Wreath and Shell Cross in Frame.
 265. Mrs. C. Cook. Five Frames of Hair Device Work.
 907. Miss Marion Blanchard. Wax Work.
 922. Mrs. May. Skeleton Leaves.
 117. Mrs. J. Widie. Bead Pinecushion.
 930. Mrs. V. E. Howard. Bouquet of Artificial Flowers made from Silk Cocoons.
 890. Mrs. E. M. Patten. Beaded Pinecushion and Watchcases.
 929. H. W. Atwell. Everlasting Bouquet.

To the President and Board of Managers of the Seventh Industrial Exhibition of the Mechanics' Institute, of the City of San Francisco:

The undersigned Committee, appointed to examine articles exhibited and competing for Premiums at the above Exhibition, in Class 16, Section 4, do recommend the following Premiums to be awarded, to wit:

797. First Premiums to MISS MARION BLANCHARD, for Hair Work. Awarded a Silver Medal.

312. MRS. E. DOHERTY, for Hair Work. Awarded a Diploma.

702. MRS. SWANTON, for Moss Work. Awarded a Diploma.

104. D. DENNECHAUD, for Artificial Flowers (Garden). Awarded a Diploma.

740. MRS. W. J. SILVER, for Shell Work—too late for Premium—(yet we would recommend a Special Premium in her case).

797. MRS. RICHARD BROWN, for Skeleton Leaves. Awarded a Diploma.

— MRS. MAY, for Skeleton Leaves, special Premium. Awarded a Certificate.

491. Second Premiums to MRS. BENNETT, for Wax Work. Awarded a Certificate.

97. MRS. S. A. SANDERSON. Moss Work. Awarded a Certificate.

236. MRS. A. D. YOUNG. Picture made with Pins. Awarded a Certificate.

803. MRS. J. J. DAGGETT. Shell Frames. Awarded a Certificate.

833. MISS FLORENCE RUMSEY. Shell and Moss Wreaths.

786. MISS WINNEFRED WHITE (7 years old). Picture in Sea Moss. Awarded a Certificate.

147. MISS EMMA BLANCHE. Cross and Wreath, in Wax. Awarded a Diploma.

206. MISS MARY PENNIE. Wreath of California Poison Oak. Awarded a Certificate.

117. MRS. J. WIDIE, St. Paul, Minnesota. Bead Pin cushion. Awarded a Certificate.

173. MRS. F. B. MEDINA. Two Shell Wreaths. Awarded a Certificate.

55. Third Premiums to MISS KATE MITCHELL, for Picture and Wreath made from California Leaves and Flowers. Awarded a Certificate.

204. MISS NELLIE WELTY. Four pieces of Bead Work. Awarded a Certificate.

346. MRS. G. COFFIN. Wreath of Sea Moss from Alaska. Awarded a Certificate.

722. H. KAHN. Showcase of Artificial Flowers. Awarded a Certificate.

933. MRS. V. E. HOWARD. Bouquet of Artificial Flowers made from Silk Cocoons. Awarded a Certificate.

Of the First Premiums, we would recommend that Miss Marion Blanchard receive the greatest consideration, as, in our judgment, her work is superior to all others in our Class and Section.

All of which we respectfully submit, this 14th day of October, 1869.

MRS. W. E. DOMETT,
 MRS. T. DANNENBERG,
 MRS. M. R. ROBERTS,
 Committee.

CLASS XVII.

MUSICAL INSTRUMENTS.

The manufacture of Pianos and Organs have been entered into to some extent in this city—Jacob Zech being the principal Piano manufacturer, and Joseph Mayer the principal Organ maker in the city.

The organs of quite a number of the principal churches have been constructed here, and about one hundred and twenty pianos are turned out annually. Quite a number of guitars are made in this city, principally for the Spanish population.

Report of Committee, Class 17.

MUSICAL INSTRUMENTS.

- 31. F. B. Schenkein, orchestration machine.
- 233. Jacob Zech, 5 pianos, 1 set of piano keys and 3 desks, California manufacture.
- 447. Kohler, Chase & Co., Chickering piano.
- 448. Kohler, Chase & Co., 4 Mason & Hamlin organs.
- 449. Kohler, Chase & Co., Marshall & Mittauer piano.
- 450. Kohler, Chase & Co., case of musical instruments.
- 451. Kohler, Chase & Co., bass viols. banjos and drums.
- 472. A. A. Rosenberg, upright pianos, cabinet organ, harp, and case of instruments.
- 588. M. Willis, case of American cornet and band instruments, Louis Schreiber's patent, with water valve.

To the President and Board of Managers of the Seventh Industrial Exhibition of the Mechanics' Institute.

The undersigned Committee appointed to examine articles exhibited and competing for Premiums at the above Exhibition in Class 17, do recommend the following Premiums to be awarded, to wit:

233. First premium to JACOB ZECH, for Square Piano Forte. Awarded the Gold Medal.

233. Second premium to JACOB ZECH, for Upright Piano Forte. Awarded a Silver Medal.

448. Second premium to KOHLER, CHASE & Co., for Mason & Hamlin's Cabinet Reed Organs. Awarded a Silver Medal.

31. Third premium to F. B. SCHENKEIN, for orchestration. Your Committee would recommend a Diploma. Awarded a Diploma.

474. Third premium to A. A. ROSENBERG, (see Class 12) for California Publications of Music. Diploma recommended—this being the only exhibition in this line. Awarded a Diploma.

588. Third premium to M. W. WILLIS, for case of Brass Band Instruments. Diploma recommended. Awarded a Diploma.

All of which we respectfully submit.

J. V. KENDALL,
JOHN H. TITCOMB,
R. HEROLD.

CLASS XVIII.

FIBROUS AND TEXTILE SUBSTANCES, AS WOOL, COTTON, SILK, FURS, &c., RAW AND MANUFACTURED.

The exhibition of articles included in this class were more general and showed greater extent of manufacture than heretofore. Although the very worthy and remarkable exhibits of the two leading Woolen Mills of the State, made in 1868, were not this year placed before the public, owing to the fact of business changes in their firms, rendering it impossible for them to do justice to themselves and the interest they represented. This year there were new competitors for the honors and their display of goods exhibited show marked advance in this industry. The reputation of California woolen goods is so firmly established, that to speak in their commendation would be a repetition of language and superfluous.

The first Woollen Mill on this coast was started in Oregon 1857. The wool exports which included all raised for that year, was about 1,500,000 lbs. At this date there are 8 mills employing about 1500 men. With an aggregate capital of \$1,250,000 and turning out work to the value of about \$3,500,000. Consuming 4,500,000 lbs. wool; while the exports of wool for 1869 were 13,747,791 lbs. or the total wool clip in round numbers 18,250,000 lbs. since the various woollen mills have been in operation, against 1,500,000 lbs. previous, or 12 fold. The total products of wool in the United States is placed at 100,000,000 lbs. of which it will be seen California produced 18¼ per cent.

But in spite of these all encouraging facts there seems to be great lack of care on the part of the grower in forwarding the wool to the market *clean*. Objection being urged by the dealers to the presence of burrs, seed, grease and soil in the wool. The general impression is that California can do better on "Medium" rather than "Fine" wool. Considerable success has attended the introduction of the Leicester and Cotswold breeds of sheep in producing a longer staple, and which seems to be principally in demand.

The woollen interest deservedly demand the attention of those interested in the economic industries of the State, and we cannot do better than insert the remarks of Donald McLennan, Esq. an experienced manufacturer, which were delivered by him a few nights before the close of the Exhibition at the Pavilion. And which are as follows :

"Up to the present time a comparatively small quantity of woollen goods have been made on the Pacific Coast, the large portion of the consumption in California, Nevada, Oregon and adjoining Territories, have been supplied by importations from the Atlantic States and Europe. The value of woollen goods manufactured in California and Oregon, during 1868, was about 2,500,000, while it is estimated that importations, from all sources, ranged between \$10,000,000 to \$12,000,000. This condition of affairs is remarkable when we consider that California produces more wool than any other State in the Union, and Oregon more than the mills there consume. It is true that but little more than ten years have passed since the first woollen mill was erected on this Coast, and the business was beset with great difficulties from the start. The difficulties have, in large part, been removed, but a lack of enterprise is still shown by our people in this branch of industry that contrasts strangely with their speculative feelings, as evinced by the ventures in mining and real estate. I do not wish to be understood as depreciating those interests, which, if in a healthful condition, are of primary importance to the welfare of our people, but I claim that if a tithe of the money invested and lost in the former had been invested in woollen mills, properly conducted, the capital so used would have been returned tenfold to its owners and the people of the State at large. This will seem a somewhat extravagant statement, but the results of the past amply justify me in making it.

Let us see some of the grounds that I base my statement on : The first woollen mill in the Pacific States was erected in Oregon in 1857, the machinery of which was of a very limited capacity—in fact, was less than the smallest mill now running on the coast. In this city, the Pioneer Woollen Mill was erected in 1859, and the Mission Woollen Mills in 1860, both being at first of small capacity, and their manufactures of very limited range, both in quantity and quality. The quality of the wool then grown in this State and Oregon was about the poorest known in the United States, and the quantity not a tithe of the present production. The wool was purchased on orders from the Atlantic States, and the average price was not over eight cents per pound prior to the erection of mills in this city. Gradually the competition between the mills and the agents for Atlantic purchasers stiffened prices of wool and encouraged growers to raise a better staple. The mills also increased their range of manufactures, improving the quality of their products, as well as quantity and variety. The inducements thus offered to produce finer grades of wool for local consumption stimulated wool-growers to importing and raising finer varieties of sheep, so that the present time, in, say a decade from the mills first running, the annual wool clip of California is estimated at 18,000,000 pounds, and the value ranges from 10 to 20 cents per pound, averaging fully 16 cents. It will thus be seen that, in an indirect manner, the influence of our woollen mills has increased wool-growing fully tenfold in quantity and at least one hundred per cent, in average value. During the same period the profitableness of wool-growing has also raised the value of grazing land in all portions of the State.

In machinery, from employing six sets of cards in 1859, the productions of woollen goods now requires 60 sets in California alone, and there is still need for quadruple that number before the entire clip of wool can be most profitably consumed. Out of about 18,000,000 pounds wool clip of 1869 *only 4,000,000 will be manufactured in the State*, the balance being shipped to Atlantic ports. Of wool thus shipped away considerable *will return as manufactures* to be used by our people. It is certainly an anomalous condition of things that we should ship the bulk of our wool clip abroad and import so largely of its manufactures in return. We have the reputation of being an extravagant people, but in neglecting the resources of wealth and increased supplies of labor we can be properly termed the most wasteful among the States.

If wool, costing 20 cents per pound, is sent abroad, it brings just that value per pound to the people of the State. That wool, if manufactured in your midst however, will average 100 cents per pound when it leaves the mills in fabrics for consumption. Of the difference in value, after deducting shrinkage in cleaning and dyes, etc., which are imported, fully 30 cents per pound is expended for labor. It will thus be seen that from \$4,000,000 to \$5,000,000 labor is *annually lost or taken away from our midst, and by our own deliberate act and neglect*. We have unrivalled facilities for

profitable export to Nevada and the new territories on the one hand, and the entire Pacific coast on the other, the latter now deriving their needed supplies from the Atlantic States and Europe. We should be the richest of States if we intelligently competed for these markets of the Pacific coast which are virtually soliciting our trade. One thing is certain, and that is, unless we vigorously exert ourselves we will be left behind in the race for prosperity by our sister States. All our natural advantages will be lost from inaction and neglect, and when too late to remedy it we will realize the fact. The manufacturing interests of Great Britain have been the cause of her vast commerce, which carries her products to all parts of the world, all countries thereby paying her tribute as the centre of finance. The United States possesses greater natural advantages, and her people need only to exercise the same energy and economy to produce the same result.

The woolen manufactures of the Pacific coast, however, are more especially the subject of this address, and before closing I desire to point out the principal causes that prevent our mills from extending their operations to that degree that the wool clip of California affords. First, the tariff of the United States is almost prohibitory on certain qualities of fine wool which we cannot raise profitably in the United States. These wools, from lack of our competition, sell at low price, and can be manufactured in Europe and imported in defiance of the best products of our mills. The tariff on wool needs revising and intelligent action, and discrimination in so doing, so as not to oppress either the manufacturer or the wool grower.

The greatest difficulty is, however, the distaste the people of California, and more particularly the inhabitants of this city, have to investing in industrial corporations. There is a feverish desire to grow rich speedily by speculating, which, in many cases, if narrowed down, is scarcely removed from actual gambling. The disposition of the masses of our people is to keep their individual capital available for any transient investment, and under their immediate control. This, under circumstances affecting property a decade since, was perhaps to be commended, but at present is inimical to the permanent prosperity of the State. As long as it continues to prevail all manufacturing enterprises are at the mercy of popular caprice and transient financial panics, but we have only to practice the business tact, economy and policy prevailing in the Atlantic States in similar enterprises to become the most prosperous State in the Union. To succeed in manufacturing enterprises we need the mass of property holders to be pecuniarily interested in them, which will make their foundations deep, broad and strong. I look confidently to see all drawbacks to our prosperity removed, and the sooner it is done the better for the material interests of our entire people. Then, indeed, will San Francisco become the Queen of the Pacific, whose commerce and enterprise will be found in all the marts of the world, and the vast expanse between the Sierras and the Mississippi be interwoven with a net work of railroads that shall be the wonder of the age."

The cultivation of Flax has been entered into experimentally with considerable success, the establishment of the Pacific Linseed oil works has given some impetus and there were probably some 500 acres under cultivation producing about 129,000 lbs.

Some considerable attention has been called recently to the "Ramie Plant of which there were several exhibits, and the report of the Committee of Sec. 1 of this class is full of interest to California—in this connection, to this report we would draw your consideration.

In Silk much interest has been felt from the efforts made to introduce the culture and manufacture into this State. The Legislature offered large bounties for mulberry tree Plantations, and Silk Cocoons for the purpose of encouraging this industry and which doubtless induced many to enter into the raising of silk worms, some in good faith, others from speculation, finding the wording of the act susceptible of many interpretations.

Silk culture has met with many difficulties and the manufacture with still more but after the studied experience of some 4 or 5 years of alternate success and failure the general opinion is that there is no climate or soil better adapted to it than that of California. The experience of old silk growers, have found a new school here, and although, there is yet a difference of opinion as to the best method of setting out Mulberry trees and which can only be settled by further experience and comparing of results, still all concur in the belief that never was a country better adapted to Silk culture. Considerable quantities of eggs have been exported to France and Italy and in a majority of cases produced a worm free from the taint of disease. The exportation of the egg has been found profitable so much so, that the manufacturer here has found it difficult to find sufficient unperforated Cocoons to make a single Flag for the capital. The belief is that it would be found more to the benefit of the State and consequently to individual effort, if in place of exporting the eggs, perfect Cocoons were produced here and the various processes of manufacture carried on to the woven fabric.

There is certainly no industry less laborious or tedious than that of silk culture. It is really a pleasant occupation and one which up to the reeling of the thread from the Cocoon might give remunerative employment to the more delicate or younger members of a farmer's family, and beyond that, the manufacture we are assured by the Messrs. Neuman can be carried on to profit here. These gentlemen have given much attention to this subject, having the necessary machinery for the manufacture of the broadest silk cloth, and having already made a National Flag for the State Capitol, besides other articles. They feel perfect confidence in the success of a silk manu-

factory on a large scale, if the supply of the raw material will be equal to the demand.

But without doubt speculation in the State Bounties must cease before we can expect to arrive at good results. The action of the State Board of Awards, in refusing premiums to perforated Cocoons and the decision of the Supreme Court as to the meaning of a "Plantation of Mulberry Trees," has doubtless shown growers the necessity of giving strict attention to the best modes of culture rather than the counties to be looked for, and to a considerable extent will modify the report of the Committee of Sec. 2 of this class. The absence of the Silk Looms referred to by same Committee is due to the fact that Messrs. Newman who have always shown considerable ambition in this speciality did not feel able to place on exhibition their extensive new machinery, and did not desire to exhibit their old apparatus, which had already been exhibited.

Report of Committee, Class 18, Sec. 1.

FIBROUS AND TEXTILE SUBSTANCES AS WOOL, COTTON, SILK, FURS, ETC., RAW AND MANUFACTURED.

Wool and Woolen Manufactures.

16. G. G. Macy, one dozen hand-made house mats.
91. Main and Winchester, robes and blankets.
93. A. Hahne & Co., (Pioneer Factory) samples of wadding, batting and comforters, California manufacture.
108. W. D. Perine, Sacramento, sample of flax.
148. Mrs. Anna Krause, Berlin wool robe.
170. Alexander Mackay, 8 pieces of list and rag carpet.
272. Capitol Woolen Mills, Sacramento, blankets, cassimeres and flannels.
273. B. Boezl, specimens of the ramie plant.
274. B. Boezl, cloth made from ramie plant, in use two years.
347. Capt. Blethen, specimen of the Peter plant and fibre.
453. Kohler, Chase & Co., 4 piano covers.
454. J. Hutchinson, specimens of ramie plant and fibre.
493. Eureka Wadding, Batting and Comforter Manufactory, samples of wadding, batting and comforters.
532. Mrs. M. Peterson, barouche robe.
650. Brown, Bros. & Co., samples of cassimeres from Oregon City Woolen Mills.
853. Robert Perry, samples of California flax raised at Tomales, Marin County.
855. Henry Brook, 6 colored sheepskins, California manufacture.
873. Henry Brook, 5 colored cassimere goat skins, California manufacture.
- 8.9. A. C. Carey, Malden, Mass., 2 pairs automatic knit stockings.

To the President and Board of Managers of the Seventh Industrial Exhibition of the Mechanics' Institute.

The undersigned Committee, appointed to examine articles exhibited and competing for Premiums at the above Exhibition, in Class 18, Section 1, do recommend the following Premiums to be awarded, to wit:

272. First premium to Capitol Woolen Mills of Sacramento, for best display of blankets and flannels, of superior quality and beautiful finish. Although this establishment has been but recently started, its fabrics will rank with the finest and best produced in the United States. We would recommend that the Gold Medal be awarded to this company.

493. Second premium to Eureka Wadding, Batting and Comforter Manufactory, for specimens of superior wadding, batting and comforters.

This is a comparatively new industry in this State. The samples exhibited are equal to the best imported. We recommend that a Silver Medal be awarded.

650. Second premium to BROWN, BROS. & CO., for specimens of Cassimeres from Oregon City Woolen Mills. The Committee desire to commend in an especial manner the excellence of these goods. The quality is of the best, while the great variety of styles furnishes materials from which to satisfy all tastes. We recommend a Silver Medal.

93. Third premium to A. HAHNE, & CO., (Pioneer Factory) for fine specimens of Wadding, Batting and Comforters of California manufacture. Excellent goods, gotten up in good style, and worthy of a Silver Medal.

273—274. The Committee desire to call special attention to the specimens of the Ramie fibre and cloth made from the same, exhibited by B. BOEZL, and to specimens of the growing plant, and of the fibre, displayed by J. HUTCHINSON. We do not propose a premium, because this enterprise is, as yet, but an experiment, but from a careful examination of the subject we are strongly convinced that the cultivation of

this most valuable plant can be successfully introduced into California. We are satisfied it will flourish in the Southern counties, particularly in Toulare and Kern Counties, where the nights are comparatively warm. Wherever Indian corn can be raised in perfection, there will the Ramie grow. It promises such large profits that once introduced it must soon become the great staple of the Southern section of our State.

It is claimed for the Ramie that it yields a finer fibre than Sea Island Cotton, is stronger than the best flax or hemp, and is almost as brilliant as silk.

It has a staple of 36 to 40 inches, and is therefore of great value for mixing with other textile fibre of short staple. Eminent botanists who have experimented upon it pronounce it 50 per cent stronger, and better adapted for the manufacture of the finest faces than the best grade of Belgium flax or linen fibre, and that it can be spun as fine as the fibre of flax and is twice as durable. It can be mixed with either cotton, wool, flax or silk, producing a variety of tissues of great strength beauty and fineness.

It is a hardy and vigorous grower, and its growth is continuous. A crop once planted will stand for years without requiring to be renewed. It requires less labor to cultivate than cotton—is not destroyed by worms—does not suffer from excess of rain and withstands the longest drought without injury. From all that is related of this wonderful plant, it would seem that it is exposed to no special danger in a suitable climate, has no enemies, requires but little labor, needs but a small capital to produce a crop, propagates rapidly, yields largely, commands a ready market at a high price for all that can be produced, and the market is never likely to be over-stocked, as the area for its successful growth is limited to a belt along the Gulf coast of the Southern States, where it is no longer an experiment, and to the Southern Countries of California and perhaps the valley of the Gila. The moist, rich soil and the warm climate, free from heavy frosts, of the Tular Valley, ought to produce it in perfection. Your committee consider this matter of so much importance to the prosperity of California, that they beg to add to their report the following extracts from letters recently received by one of them, from a planter on the Yazoo in Mississippi, giving the valuable results of his experience in cultivating Ramie.

SATARTIA, Miss., Aug. 2d, 1869.

Herewith find sample of Ramie Silk, from a sprig a foot long, of ten days growth. This is the fibre in its rough state from an immatured stalk. We do not allow the stalk to grow for fibre this year, as our object is to increase the number of plants—and we therefore turn them down and cover them with earth as fast as possible. This morning we dug up a plant that was set out on the 7th of April last, and it had made an almost solid mass of tuberous roots, eighteen inches deep, and about ten inches in diameter, each tube being an average of an inch thick, of the color of carrots, though much harder. I mention this to show that the plant grows beyond the reach of frosts, and to the depth of perpetual moisture, so that neither cold nor drought can damage it.

Ramie is growing in estimation here, and the planting of it on a small scale, which was looked upon this spring as an experiment of a doubtful issue has now proved a decided success. *It will eventually supersede cotton in all the rich bottoms and lands subject to periodical overflows, in this latitude.* With Chinese labor, these lands cultivated in Ramie will yield three hundred dollars per acre. After the first year it requires no cultivation, as it so completely shades the grounds that neither grass nor weeds can grow near it. After the first year the only labor it requires is that of harvesting and threshing out—the first being done with a mowing machine, and the last by means of the patent Ramie cleaner. As soon as this plant gets to be fully appreciated, as it soon will be, the Empire of King Cotton will pass away, and that truly regal and wonderful plant, the Ramie, will wield the scepter and clothe the World.

As an article of apparel it will be as common to the ladies of moderate means as silks are now among the wealthy—and “Solomon in all his glory will not be arrayed like one of these.” *We have discovered that the Ramie after being dew-rotted by exposure three or four weeks, is cleaned of the gummy matter and may be threshed out clean, so as to command the highest price (2s 6d in gold), without being subject to the soaking process.* We can afford to raise it, however, at ten cents a pound, the product being three thousand pounds per acre.

W. H.

SATARTIA, Miss., Sept. 1st, 1869.

R A M I E.

The *Ramie Plant*, like every thing new, meets with opposition from those who have not practically tested it. We have tried it this year and the result is a decided success. It grows eight feet high in this climate and will make two crops a year, and probably three. Its roots grow two feet in the ground, and, notwithstanding the unprecedented drought of this summer—not a single copious rain having fallen since April—it still continues to put forth its luxuriant shoots, and grows rapidly. So dense is the shade it makes that the ground continues always moist. Ramie requires the same cultivation as corn the first year, and one good hand will cultivate thirty acres, or three times as much as can be managed when planted in cotton. After the first year little or no cultivation is required, one or two plowings only being necessary to keep the plants from entirely covering the grounds. The second year the same hand will cultivate twenty or thirty acres more, making a field of from fifty to sixty acres, which will thresh out with the Ramie cleaner working all the year. The labor of its cultivation is so light, that it can be performed by white persons, or by freedmen indiscriminately. The threshing or cleaning is done under cover.

WM. HALL.

Your Committee desire to make favorable mention of the samples of list and rag carpe manufactured by Alexander MacKay. They are really neat and durable.

Main & Winchester for a fine display of robes and blankets, and W. D. Perine for samples of California flax, in plant and in fibre, are entitled to honorable mention. All of which we respectfully submit, this Twenty Sixth day of October 1869.

ANDREW I. MOULDER

S. S. TILTON.

JOHN C. MITCHELL.

AWARDS IN CLASS 18, SECTION 1.

272. Capitol Woolen Mills, Sacramento. Blankets, Cassimeres and Flannels. Awarded a Gold Medal.
493. Eureka Wadding, Batting and Comforter Manufactory. Samples of their manufactures. Awarded a Silver Medal.
650. Oregon City Woolen Mills, Brown Bros. Agents. Samples of Cassimeres. Awarded a Silver Medal.
93. A. Hahne & Co., Pioneer Factory. Samples of Wadding, Batting and Comforters. Awarded a Diploma.
170. Alexander MacKay. Rag Carpeting. Awarded a Diploma.
91. Main & Winchester. Robes and Blankets. Awarded a Certificate.
108. W. D. Perine, Sacramento. Sample of Flax in plant and fibre raised in California. Awarded a Diploma.
16. Geo. G. Macy. Rag Mats. Awarded a Certificate.

Report of Committee, Class 18, Sec. 2.

SILK AND ITS MANUFACTURES.

Comprising; Silk Culture, Cocoons, Raw and Manufactured, Silk, Furs, Clothing, Hats, Caps, etc.

47. H. G. Ballou, lot of cocoons and silkworm eggs.
72. Edward Muller, Nevada City, sample of 50,000 cocoons of the French Annual and Japanese Green and Hybrids.
73. Edward Muller, skeins of silk, (own manufacture) of the above variety.
74. Edward Muller, sample of silkworm eggs and millers.
118. David F. Hall, San Gabriel, Los Angeles County, cocoons.
119. David F. Hall, San Gabriel. Los Angeles County, boquet made entirely from perforated cocoons.
126. F. S. George, Sacramento, sample of 100,000 cocoons.
234. Blake & Co., case of military goods.
260. Mrs Corbusier, Sacramento, sample of 100,000 cocoons, product of 1869.
286. K. Meusdorffer, case of hats.
291. Thomas A. Garly, Los Angeles, case of a variety of cocoons and silkworm eggs.
292. Thomas A. Garey, Los Angeles Raw silk in skeins and floss silk.
293. I. N. Hoag, Sacramento, samples of cocoons and silk worm eggs.
295. T. B. Flint, Sacramento, cocoons and silk worm eggs.
296. A. Packard, Santa Barbara, samples of cocoons.
298. J. H. Warwick, native silk, manufactured at Hudson City, New Jersey.
317. R. M. Adams, 2 cases of hats and caps.
339. F. J. Saufrignon, San Jose, sample of 50,000 French and Japanese cocoons.
462. Joseph Bros., lot of boys's clothing.
495. S. Figel, sample of boys' clothing.
558. Norcross & Co., 2 cases of military goods, regalia and embroidery, case of silk chenille fringes, cord, etc., and case of silk for manufacturing.
562. S. Rosenblatt, shawls, cloak and walking suits.
580. Pacific Straw Works, 2 cases of straw, Neapolitan and felt goods, illusion lace, and buckram hat and bonnet frame, California manufacture.
611. H. R. Cabery, agent, Chigago, 23 pieces of Masonic jewels and regalia.
621. Joseph Figel, samples of men's and boy's clothing.
737. Mrs. C. P. Cameron and A. A. Goddard, samples of green Japanese silk cocoons.
739. A. F. Goddard, samples of Japanese cocoons.
762. A. P. Smith, Bro. & Glover, case of cocoons.
831. California Silk Culture Co., samples of two millions five hundred thousand Japanese cocoons, raised by the California Silk Culture Co.
831. California Silk Culture Co., case of imported cocoons.
930. Pacific Neck Tie Factory, neck ties.
931. Pacific Pioneer Paper Collar Co., collars and cuffs.
934. H. Liebes, furs raw and manufactured.
904. M. Ettinger, fringes, trimmings and cords.
895. Mrs. S. A. Sellers, sample of cocoons.

To the Board of Managers of the Seventh Industrial Exhibition.

GENTLEMEN :

The committee on silk, reports a meagre display, showing a retrograde movement. The best exposition of cocoons that of Felix Gillette, and if a premium be merited by any one it may be awarded to him.

There is no exhibition of silk making this year, the absence of what was so interesting a feature last year calls for explanation, especially as it is the only branch of silk culture that has realized an appreciable step forward, but there is no evidence at all on the subject presented to the committee.

Silk culture has not been a success in California the public should know why and what are the hopes of betterment. The State offered bounties without knowledge, they were extended to promote silk making as a permanent industry, but they had the opposite effect, instead of men meaning industry, speculative men crowded in. It was the best paying agriculture to raise Mulberry trees for the State premium which was much more than they were worth, the State required the trees set out in permanent plantations but the speculators argued themselves into an idea that if set out in nursery fashion they could evade the requirements, because no distance was stated in the law, and a plantation, means a place where they are planted, and cannot mean any thing about distances, this was their interpretation and to this end they al. combined, and other evasions were ingeniously planned.

There is great difference in Mulberry as in other fruit trees, if making silk had been the object, grafted trees of choice varieties would have been planted, but as the object was to get premiums, and not to make silk, the speculators covered the land with seedlings of the coarsest varieties that make profusion of branches, every branch was cut into little bits and every bit was stuck in the ground, and shortly became good for the state bounty and for nothing else, as all experts who examined them declared. Very few wanted to feed silk worms or bother about cocoons, although for those there was also a liberal bounty for cocoons fit for silk making, until there came a bright idea into the speculative mind, which gave it a new start, the egg of the silk worm could be sold to foreigners at large prices, to help silk making there instead of in California, to get eggs you spoil the cocoon for silk making, but the state can be made all the same by the ingenious construction of law.

Provost's Manual intimates that silk worms in this fine climate will take care of themselves; only give them leaves, so the trial was made and disease killed them off by thousands. What then can be done to save our silk industry from extinction?

We suggest this—burn up the manuals! be conscious of our own ignorance! get instructors! begin in small and cautious experiments! don't crowd the worms! give them clean quarters! abandon board structures! make deep cocooneries of hollow, concrete walls, and double roofs to equalize the fierce mid-day heat, and the chilling night temperature! quit speculating, get proper mulberry trees in place of the thirty millions which now encumber the ground, feed no leaves until the trees are three years old and begin to bear fruit—until then the elements of silk are not fully developed in the leaf.

Let us give our minds to sober industry and honest endeavor, when we do these things we believe we shall prove the truth of the Hindoo proverb, "with time and patience the mulberry tree becomes satin."

There is exhibited by Mrs. Volney E. Howard, of Los Angeles, a basket of artificial flowers made from silk cocoons—this is a new material for the purpose and every one is impressed with its superiority, as well as for life likeness, as for promised durability. It opens out a much needed use for pierced cocoons, which have small value for silk making.

Your Committee recommends the most favorable mention of the new and ingenious addition to our home industries and to the list of useful inventions which California has furnished to the older nations of the world.

J. S. SILVER, } Committee
M. HUBBARD, } on Silk.

To the President and Board of Managers.

The undersigned Committee to examine articles exhibited in Class 18, Sec. 2, recommend as follows:

286. Second premium to K. MEUSDORFFER, for the best Hats. Awarded a Silver Medal

934. Second premium to H. LIEBES, for best Furs. Awarded a Silver Medal.

558. Second premium to NORCROSS & Co., for Regalia Embroidery. Awarded a Diploma.

621. Third Premium to JOSEPH FIGEL, for sample of Men and Boys Clothing Awarded a Certificate of Merit.

495. Third premium to S. FIGEL, for Boys Clothing. Awarded a Diploma.

904. Third premium to M. ETTINGER, for Silk Fringes and Cord. Awarded a Diploma.

611. Third premium to H. R. Cabery, Chicago, for Masonic Jewels and Regalia. Awarded a Diploma.

931. Third premium to Pacific Pioneer Paper Collar Company, for Paper Collars and Cuffs. Awarded a Diploma.

580. Third premium to Pacific Straw Works, for Straw Goods. Awarded a Diploma.

317. Third premium to R. M. ADAMS, for Hats and Caps. Awarded a Diploma.

930. Pacific Neck Tie Factory, for Neckties.

Fourth premium to the following exhibitors:

462. JOSEPH & Bros., Boys Clothing.

Certificate awarded Paper Neck Tie Factory,

We the undersigned Committee understand the first premium to be a Gold Medal Second premium a Silver Medal. Third premium a Diploma. Fourth a Certificate of Merit. All of which is submitted.

M. HUBBARD, }
B. F. MEAD, } Committee.
L. SACHS. }

In addition to above awards there was a Silver Medal awarded to ED. MULLER, of Nevada City, for efforts in silk culture.

Report of Committee.

CLASS XIX.

SEWING MACHINES AND NEEDLE WORK.

17. Mrs. J. A. B. King, picture in worsted.
18. Mrs. W. S. Chandler, "American Coat of Arms," in needle work.
32. Mrs. Schrinor, crochet bed-spread.
34. Mrs. Robert Chandler, sofa cushion embroidered.
44. Mrs. E. Hopkins, sample of knitting.
50. Mrs. Julius A. Gilbert, 2 fancy pin cushions.
64. Sarah E. Hoadley, bed-spread.
65. Miss A. H. Ruggles, 2 cases of neck ties, bows, knots, etc.
70. Mrs. Rosena Bessey, case of needle work and infants' clothing.
77. Ladies' Depository, 2 cases of Ladies' and infants' clothing.
78. Antoine Prousergue, 3 cases of ladies' and childrens' underwear and waists.
82. Mrs. A. S. Magendic, embroidered sofa pillow.
117. Mrs. S. E. Hollister, knit bed-spread.
98. Miss Mary Ann Murphy, picture in worsted, "The Immaculate Conception."
99. Miss Mary Ann Murphy, picture in worsted, "The Bird of Paradise."
105. Mrs. J. G. Klumpke, embroidered rug.
121. Mrs. W. H. Parker, crape and chenille embroidered sofa pillow.
127. Mrs. Regensberger, specimens of embroidery.
128. Mrs. C. P. Wolcott, a rustic scene in worsted.
137. F. Entz, samples of perforated stamping.
138. F. Entz, piece of embroidery.
144. P. H. Velbert, specimen of tapestry.
145. Eliza Prytc, sample of embroidery.
146. Eliza Prytc, wreath of flowers in worsted.
149. Miss Anna H. Jordan, samples of crochet and worsted work.
150. Mrs. Lawrence Reilly, bed-quilt.
154. Miss Lizzie Martin, bed-quilt, "Joseph's Coat of Many Colors."
161. Mrs. Mary Ann Ayers, crochet basket and tidy.
162. Mrs. H. Robson, bed-spread.
163. Miss Viola Lillienfeld infant robe trimmed with tatting.
172. Mrs. F. B. Medena, Worsted wreath.
182. Mrs. Fanny P. Chandler, knit bed-spread.
203. Mrs. C. Latham, chenille shawl.
232. L. H. Bailey, picture in worsted.
222. Miss Henrietta Stranss, crochet bed-cover.
261. Mrs. A. Van Dusen, 3 down capes and trimmings.
266. Mrs. Kirk, 2 old-style bonnets.
284. Mrs. M. A. Ransome, samples of knitting and needle work.
313. Mrs. H. Forsman, infants' knit clothing.
320. Mrs. H. T. Thoburn, samples of embroidery.
213. Mrs. Mary E. McClellan, tatted tidy.
328. Mrs. Danneberg, case of infants' wearing apparel.
343. Mrs. Alexander, specimens of needle work.
394. Mrs. James Sullivan, case of goods stamped for embroidery, and case of embroidered goods.
468. Miss Annie Weston, bed-spread.
476. Mrs. R. E. Caswell, showcase of millinery.
479. Bartram & Fanton, G. H. Arnold, Agent, sewing machine and sample of work.
482. Miss Mary Odermatt, picture in worsted.
487. Miss Eva Frankenbach, crochet tidy.
499. Women's Co-operative Union, 8 cases of ladies' gents' and children's furnishing goods and fancy articles.
512. Mrs. J. A. Mayhew, case of millinery and dress-making goods.
515. Madame C. Goldberg, case of millinery goods.
538. Mrs. W. Scott, embroidery in chenille and velvet.
622. Howe Machine Co., 6 table sewing machines, 3 cabinet sewing machines, and 2 cases of samples of machine work.
623. Pacific Sewing Machine Co., 3 table shuttle machines, 3 table single thread machines, and one hand machine.
630. Grover & Baker, 6 family elastic stitch sewing machines, 2 shuttle stitch machines, 2 cabinet elastic stitch machines, and, 2 cases of specimen stitching.
676. Mrs. E. H. Watson, aged 81 years, knitted tidy and laces, knitted stockings and socks.
695. Mrs. J. C. Daggett, samples of infants' socks.
697. Mrs. L. F. George, bedspread made by an insane woman.
698. Mrs. M. Phelps, knit bedspread.
713. F. Hansen, silk picture.
724. Mrs. R. L. Jones, Sacramento, perfect-fitting 12 formed model for fitting dresses.
730. Mrs. Benj. Haynes, affghan with poll parrot in center.
733. Mrs. H. H. Clark, bed-quilt.
734. Mrs. H. H. Clark, bed-spread.
744. A. H. Suplee, 9 Elliptic sewing machines.
745. A. H. Suplee, American button-hole machine.
746. Singer Manufacturing Co., Robert H. Yates, Agent, 7 Singer's Sewing Machines
747. Singer Manufacturing Co., sample book and 2 show cases containing specimens of work.
754. Miss M. E. Scott, 2 pieces of tapestry work,
765. Mrs. Owen Conly, patch-work bed-quilt.

780. Mrs. John Smith, pair of knit mittens.
 805. Mariah Sutherland, 1 tapestry picture, (Crowning of Queen Esther).
 812. Capt. Barron, 1 tapestry picture, (George Washington).
 841. Mrs. P. Weller, trimmed ladies' and childrens' dress patterns.
 843. Mrs. Hasbronek, patch-work bed-quilt.
 356. H. Friedlander & Co., 1 ease of underwear.
 900. A. H. Suplee, Affghan.
 532. Mrs. Peterson, affghan for carriages.
 865. D. Moss, 2 tapestry fire screens.
 870. Jeannette Suter, ease of fancy needlework and machine embroidery.
 873. Miss J. T. Gray, 1 affghan.
 148. Mrs. Anna Krause, Berlin wool robe.
 876. Mrs. Bannon, samples of ladies dress patterns.
 915. Mrs. C. E. Williamson, hearth rug.

*To the President and Board of Managers of the Seventh Industrial Exhibition of the
 Mechanics' Institute.*

GENTLEMEN : The undersigned Committee appointed to examine and report on articles, in class 19, beg to classify their recommendations as follows :

182. Mrs. Fanny P. Chandler, Knit Bed-spread. Awarded a Diploma.
 96. Mrs. S. E. Hollister, Knit Bed-spread. Awarded a Certificate.
 32. Mrs. Schrinor, Crochet Bed-spread. Awarded a Diploma.
 162. Mrs. H. Robson, Crochet Bedspread. Awarded a Certificate.
 222. Miss Henrietta Strauss. Crochet Bed-spread.
 64. Sarah E. Hoadley, Log Cabin Quilt. Awarded a Diploma.
 154. Miss Lizzie Martin, Bed-quilt, "Joseph's Coat of Many Colors." Awarded a Certificate.
 725. A. H. Suplee, Affghan, very fine. Awarded a Diploma.
 532. Mrs. Peterson, Affghan for Carriages. Awarded a Certificate.
 805. Mariah Sutherland, Tapestry Picture, "Crowning of Queen Esther." Awarded a Diploma.
 232. L. H. Bailey, Worsted Picture. Awarded a Certificate.
 261. Mr. A. Van Dusen, Down Capes and Trimmings. Awarded a Diploma.
 476. Mrs. E. E. Caswell, case of Millinery. Awarded a Diploma.
 515. Madam E. Goldberg, case of Millinery. Awarded a Certificate.
 512. Mrs. J. A. Mayhew, Dressmaking. Awarded a Diploma.
 499. Women's Co-operative Union, Fine Needlework. Awarded a Diploma.
 77. Ladies' Depository, Cambric Embroidery. Awarded a Diploma.
 70. Mrs. Rosena Bessey, Silk and Flannel Embroidery. Awarded a Diploma.
 343. Mrs. Alexander, Embroidery.
 328. Mrs. Dannenberg, case of Infants' Apparel. Awarded a Diploma.
 78. Madame Prousergue, Childrens' Underwear. Awarded a Certificate.
 394. Mrs. James Sullivan, Silk and Flannel Embroidery. Awarded a Certificate.
 213. Mrs. Mary E. McClellan, Tatted Tidy. Awarded a Diploma.
 163. Miss Viola Lillienfield, Infant Robe trimmed and tatted. Awarded a Certificate.
 203. Mrs. C. Latham, Chenille Shawl. Awarded a Diploma.
 172. Mrs. F. B. Medena, Worsted Wreath. Awarded a Diploma.
 137. F. Entz, Perforated Stamping. Awarded a Diploma.
 127. Mrs. Regensberger, Embroidery, new kind. Awarded a Diploma.
 105. Mrs. J. G. Klumpke, Embroidered Rug. Awarded a Diploma.
 34. Mrs. Robert H. Chandler, Embroidered Sofa Cushion, "English Coat of Arms." Awarded a Diploma.
 82. Mrs. A. S. Magendi, Sofa Pillow. Awarded a Certificate.
 121. Mrs. W. H. Parker, Crape and Chenille Cushion. Awarded a Certificate.
 65. Miss A. H. Ruggles, Neckties. Awarded a Diploma.
 356. H. Freidlander & Co., Underwear. Awarded a Certificate.
 538. Mrs. W. Scott, Embroidery in Chenille and Velvet. Awarded a Certificate.

There were several articles entered too late to receive premiums, but were worthy of mention; among them were a white bed-spread, by Mrs. H. H. Clark, very fine. Two pieces of tapestry work by Miss M. E. Scott, very nice. One tapestry picture, "George Washington," by Capt. Barron, very fine. Two tapestry fire screens, one in plain cross stitch, the other in raised work, by ———, beautiful. One knit bed-spread, by Mrs. M. Phelps.

All of which is submitted.

MRS. J. C. ROGERS, }
 M. FOUTS, } Committee.
 M. W. CLARKE. }

CLASS 20.

**HORTICULTURE, AGRICULTURE, SUBSTANCES, used for
 FOOD etc., VINIOUS PRODUCT.**

The exhibits in this class were very fine and demonstrated the resources of the State to a remarkable degree, all the fruits of the season were exhibited and covered a very wide range, being a source of great astonishment to visitors from abroad.

The Climate of California seems admirably adapted to the cultivation of articles

included in this class, in fact it may be said that their growth are almost spontaneous. The traveller through the once fabulously rich but now comparatively deserted mining camps of the mountains, is astonished to find himself surrounded on every side, by orchards crowded with fruits, and gardens loaded down with flowers. And where the expensive ditches and water supplies, once furnished water to the rich mining claims in its immediate vicinity for the purpose of extracting the precious metal, one now sees these streams employed with a more civilizing influence in irrigating the garden and orchards producing these flowers and fruits.

And so to a greater extent throughout the valleys, there, this industry has been entered into on a large scale, and with proportionate good results. There is such a variety of climate in California, extending as the State does, from latitude 32 degrees 45 to 42 degrees, and a considerable portion being within the range of the dense and cold fogs and winds from the ocean, that almost every species of fruit found on the Atlantic Coast grow here. Apples and Figs, Olives and Cherries, Gooseberries and Lemons, whether indigenous to the north or south, are all included in the growth of this State.

The present number of growing fruit trees are estimated as follows :

Apple Trees,	2,500,000	Quince Trees,	50,000
Peach " "	900,000	Apricot " "	70,000
Pear " "	500,000	Fig " "	50,000
Plum " "	200,000	Lemon Tree,	7,500
Cherry " "	110,000	Orange " "	45,000
Nectarine " "	30,000	Olive " "	20,000
Prune " "	9,000	Almond " "	35,000
Walnut " "	30,000	Gooseberry Bushes,	250,000
Raspberry Bushes	1,200,000	Strawberry " "	20,000,000
Grape Vines,	30,000,000		

In addition there were raised about 200,000 lbs. peanuts; orange trees when full bearing yield from 1000 to 1500 each, and selling in San Francisco at \$30 to \$40 per thousand, California Oranges are inferior to none. The Lemons are somewhat bitter needing more careful cultivating but are improving. Figs yield twice per year, are of excellent quality, quantities are dried and compote with the imported article. The Peach Tree yields handsomely, commencing to bear fruit at two years and bearing fruit for fifteen years, the quantity produced is very great and prices rank from 50 cents to 2 dollars per basket of 30 lbs.

The cultivation of the grape receives a constantly increasing attention and almost every known variety is grown here, it is estimated that about 2,000,000 lbs. were sold last year for table consumption, and 5,000,000 gallons of wine were expressed in same period, but few raisins are made as yet although some splendid samples of raisins have been exhibited from the ground of Bugbee of Folsom.

Strawberries seem to be the favorite fruit, the crop of 1869 was very fine and exceeded 2,000,000 lbs. commanding from 6 to 38 cents per lb. Chinese labor is used to a large extent, profitable in gathering and nurturing the bushes.

The large crops of fruits being more than could be consumed in the localities, have developed the business of preserving the same to a considerable extent in this city, Messrs. Cutting & Co. employing during the season some 400 hands principally in putting up fruits.

There were canned last year in this city 25,000 cases of assorted fruits, 25,000 cases Tomatoes, 6,000 cases Jellies, and 3,500 cases Jams.

The Manufacture of Cigars is carried on quite extensively, both by our own, and our Chinese population, of the former there being 53, and of the latter 42 establishments, the number of hands engaged being about 2,500, two thirds Chinese; and the number of cigars made during the year 1869 being 55,000,000. It is amusing to observe the firm names adopted by some of the Chinese cigar makers, such as Colombo & Co., Hermanns & Co., Portegas & Co., and other names of celebrated Havana makers, whose names sound as much like Chinese names as a penny whistle sounds like a volcano.

As the mining interests seem to waver, so does the agricultural improve; there were sown in wheat, in 1869, 1,286,133 acres; and in barley, 468,076 acres; producing 25,000,000 bushels of wheat, and 9,360,000 bushels of barley, or about 20 bushels per acre. The product of wheat per acre averages very large, and compares well with the crop of other States—for instance, Illinois, 11 bushels; Ohio, 13; Missouri, 14; Minnesota, 15; Nebraska, 15; New York, 14; Arkansas, 13; Tennessee, 6; Kentucky, 8½; Vermont 16; and Kansas 5 bushels to the acre. In reducing the wheat to flour, principally for home consumption, there are in the State 70 steam power and 68 water power grist mills, having in the aggregate 323 run of stone, and grinding 2,000,000 barrels of flour.

The manufacture of wine has been entered into quite extensively, with excellent success, and promise of considerable wealth to the State. As before stated, the amount of wine made during 1869 amounted to 5,000,000 gallons; and in addition to which were 200,000 gallons of brandy. Very excellent qualities of sparkling wines are now being made here; and the brand of Landsberger & Co., and others, to a considerable extent, have lessened importation of foreign Champagne. To this house is due the credit of first successfully introducing native Champagne, made from fermentation in the bottle.

There is now a large amount of capital invested in this industry, and although there are no Moet and Chandon, with their capital of ten million dollars, or Jacques-son with a capital of four millions among us, yet it is evidence of faith, in the finan-

cial soundness of this industry that so many have embarked in it with large amounts of capital. Of the sales the Buena Vista Vinicultural Society supplied 2,000 cases and baskets of sparkling; 20,000 gallons of white wine. Landsberger & Co., supplied about 6,000 cases of sparkling and "Private Cavee."

The exports of n five wines, for the year 1869, are as follows: 1,051 pipes and casks; 109 barrels; 104 octaves; 40 kegs; 11,534 cases; 152 baskets; 444,483 gallons.

There is little doubt that with age and experience California will furnish a standard of wine unsurpassed by any of the older wine producing countries.

There are several large Sugar Refiners in this City, refining principally the products of China and the Hawaiian Islands, with a capacity of 165,000 lbs. per day. The import of raw sugar amounted in 1869 to 58,442,980 lbs., of which about 38,000,000 were refined by local refineries, against import of 34,285,435 lbs; and 23,000,000 pounds refined by local works in 1868—the consumption being estimated at 45 million pounds for 1869. Experiments have been made in the culture of beet rootsugar with indifferent success.

Some very good samples of sugar and syrup, produced from the Chinese cane or Sorgho, have been shown by Mr. J. H. Purdy, of Monterey County, (who has fifty acres in), with prospect of good success.

Report of Committee.

CLASS XX.

HORTICULTURE, AGRICULTURE, SUBSTANCES USED FOR FOOD, ETC., VINOUS PRODUCTS.

SECTION I.

Comprising Flowers, Plants, Agricultural Products, Fruits and Vegetables, Tobacco Raw and Manufactured, etc.

58. H. A. Burnett, Sacramento, sample of mulberry trees.
59. John H. Ferris, Sacramento, sample of mulberry trees.
60. Lyttleton Waldrum, Sacramento, sample of mulberry trees.
100. O. W. Reed, sample of 30,000 mulberry trees.
101. W. M. Haynie, Sacramento, 2 mulberry trees 2 years old.
102. W. M. Haynie, Sacramento, bale of hops.
103. T. G. H. Jones, Sutter County, sample of 5,000 mulberry trees.
109. W. D. Perine, Sacramento, bale of hops.
125. F. S. George, Sacramento, sample of mulberry trees.
136. Edward Muller, Nevada City, sample of 5,000 mulberry trees, morus alba variety.
196. R. J. Merkley, bale and bunch of hops.
228. M. Hosenberg, Sacramento, 2 Mediterranean squash.
229. M. Hosenberg, Sacramento, box of California almonds.
276. E. A. Upton, natural flowers in pots and cut dahlias in glass.
294. I. N. Hoag, Sacramento, sample of mulberry trees, two years old.
336. A. P. Smith, San Diego, sample of mulberry trees, 2 years old.
337. Servais Towner, San Diego, sample of mulberry trees, 2 years old.
338. F. J. Saufrignor, San Jose, sample of 5,000 mulberry trees, 2 years old.
340. Mrs. L. Prevost, San Jose, sample of 5,000 mulberry trees, 2 years old.
341. H. S. Lubbock, San Jose, sample of 5,000 mulberry trees.
342. J. Gambert, San Jose, sample of 5,000 mulberry trees.
366. B. F. Headen, sample of fruit.
368. L. A. Gould, lot of fruits.
392. H. F. Hutchinson, 8 boxes of assorted dried fruits.
412. Wan Yune & Lee Yuck, samples of Chinese goods.
417. Robert G. Clark, Sacramento, samples of mulberry trees from plantation of 5,000.
418. James B. Welty, Yolo County, samples of mulberry trees.
423. Robert Williamson, Sacramento, samples of squashes, potatoes, apples, quinces, and pears.
426. Boggs Bros., Sherman Island, samples of citrons, watermelons and potatoes.
480. Mrs. Hass, San Leandro, Alameda, bale of hops.
481. S. Huff, San Leandro, Alameda County, squash.
502. J. W. Gale & Co., Commission Merchants, California peanuts from S. Hawk, Sacramento; fruit, marrowfat squash, and corn on the stalk, from Jared Runyon, Sacramento River; fruit, orange, lemon and lime trees, and Norfolk Island pine, from M. Ryan, Sonoma; fruit from Oak Knoll, Napa; fruit from Dr. J. Strentzel, Martinez.
521. Geo. West, Stockton, 2 boxes of foreign grapes.
569. David De Bernard, samples of water melons.
590. Mrs. Hildenbagen & Co., St Petersburg, Russia, case of Russian cigarritos.
598. B. F. Headen, Santa Clara, samples of apples, pears, quinces and foreign grapes, osage oranges, almonds and black walnuts.
602. D. F. Adams, San Jose, specimens of pears and apples.
603. G. W. Tarlton, San Jose, pears, apples, quinces and 4 mammoth squashes.
604. J. W. Patterson, San Jose, apples, pears, plums, quinces, and four small cases of dried fruits.
605. J. E. Brown, variety of foreign grapes.
606. J. S. Greenall, Sacramento, specimen of apples.
607. E. Andrews, Sonoma, specimen of pears.

608. Dr. J. Strentzel, Martinez, California osage oranges, pomegranates, lemons, English walnuts, almonds, figs, and general variety of foreign grapes.
612. J. R. Nickerson, Lincoln, Placer County, general variety of apples, pears and foreign grapes.
614. D. Flint, sample of hops.
678. Theodore Bagge, Oakland, specimens of Australian glory peas.
684. Thos. Appleby, dahlias, Japanese lilies, gladiolus, hollyhocks and bouquets.
714. R. S. Thompson, Napa, 14 varieties of foreign grapes.
726. W. S. Jacks, Napa City, specimen of Italian Chestnut on the limb.
750. Obed Worth, samples of fruit, apples, pears, quinces, Osage oranges, etc.
760. J. O. Brown, 2 sweet potatoes weighing 5 lbs. each, and 1 Irish potato weighing 3 lbs.
765. Mrs. T. H. Hittell, 1 amaryllis.
778. R. G. Perkins, 3 specimens of Japanese tea plant.
779. R. G. Perkins, 3 specimens of the Ramie plant.
817. D. L. Perkins, Sherman Island, 146 varieties of vegetable seeds in bottles.
818. D. L. Perkins, Sherman Island, collection of sweet, pop, yellow and white dent corn.
819. D. L. Perkins, Sherman Island, sample of yellow Danvers mammoth onions.
600. L. A. Gould, Santa Clara, apples, pears, quinces, foreign grapes, and samples of dried fruits.
863. E. H. Nordgren, Saratoga, Santa Clara County, samples of apples.
924. J. Harmony, apples.
925. E. Brown, pound pears.
932. Thomas B. Flint, mulberry trees.
933. Mrs. C. W. Watson, specimen of silk cocoons.
867. Geo. Smith, Sac River, sweet potatoes.
- R. B. Woodward, foreign plants and hot house grapes.
- R. Kerchival, Sac River, pound pears.
- Moore, Suscol, gloria mundi apples.
- H. F. Hutchinson, ramie plant and fiber.

To the President and Board of Managers of the Seventh Industrial Exhibition of the Mechanics' Institute.

The undersigned Committee, appointed to examine articles exhibited and competing for premiums at the above Exhibition, in Class 20, Section 1, do recommend the following premiums to be awarded, to wit:

612. First premium to J. R. NICKERSON, Lincoln, Placer Co., for greatest number of varieties of Apples, Pears and Grapes.

Mr. Nickerson has an orchard consisting of 150 acres of land, closely set with trees and vines; 276 varieties of Grapes; 120 of Pears, 400 of Apples; 6 of Quinces; 10 of Figs; 5 of Mulberries; 4 of Blackberries; 10 of Raspberries; 4 of Almonds; and 3 of Walnuts. Awarded the Gold Medal.

368. 600. Second premium to L. A. GOULD, Santa Clara, for the best exhibit of fruit. Awarded a Silver Medal.

631. Second premium to THOS. APPLEBY, for best display of cut flowers. Mr. Appleby has on exhibition, also, some fine, rare plants, imported from England, also a beautiful rose, called the Marshal Neil. Awarded a Diploma.

598. Third premium to B. F. HEADEN, Santa Clara, for 2nd best exhibit of Fruit. Mr. Headen, also, exhibited some fine Almonds and Black Walnuts. Awarded a Diploma.

608. Third premium to D. J. STRENTZEL, Martinez, for exhibit of foreign Grapes. Dr. Strentzel, also exhibited Pomegranates, Lemons, English Walnuts, Almonds, Figs and Osage Oranges, and fine California Oranges. Awarded a Diploma.

606. Third premium to J. S. GREENALL, Sacramento, for best exhibit of Apples. Awarded a Diploma.

392. Third premium to H. F. HUTCHINSON, for samples of Dried Fruit.

604. Third premium to J. W. PATTERSON, San Jose, for best exhibition of Plums. Mr. Patterson, also, exhibited some fine samples of dried plums, favorably noticed. Awarded a Diploma.

336. Third premium to A. P. SMITH, San Diego, for best exhibit of Mulberry trees 2 years old. Awarded a Diploma.

602. Third premium to D. F. ADAMS, San Jose, for Apples properly named. Awarded a Diploma.

867. Third premium to GEO. SMITH, Sac. River, for largest exhibit of Sweet Potatoes. Awarded a Diploma.

A special premium to R. B. WOODWARD, for foreign plants. Awarded a Diploma.

603. Fourth premium to G. W. TARLTON, San Jose, for second best exhibit of Apples—also 4 fine mammoth Squashes. Awarded a Certificate.

714. Fourth premium to R. S. THOMPSON, Napa, for the best exhibit of Grapes. Awarded a Diploma.

607. Fourth premium to E. ANDREWS, Sonoma, for best exhibit of Duchess de Angouleme Pears. Awarded a Diploma.

521. Fourth premium to GEO. WEST, Stockton, for second best specimen of Grapes, special premium. Awarded Certificate of Merit.

Fourth premium to R. KERCHEVAL, Sacramento River, for pound Pears. Awarded a Certificate.

863. Fourth premium to E. H. NORDGREN, Saratoga, for samples of Apples. Awarded a Certificate.

Fourth premium to R. MOORE, Suscol, for largest specimens of Gloria Mundi Apples. Awarded a Certificate.

502. Fourth premium to S. HAWK, Sacramento, for fine specimen of fruit. Awarded a Certificate.

502. Fourth premium to JARED RUNYAN, Sac River, for specimen of Apples. Awarded a Certificate.

502. Fourth premium to J. W. GALE & Co., San Francisco, for fine specimen of fruit. Awarded a Certificate.

Fourth premium to R. B. WOODWARD, for fine specimens of foreign Grapes, raised in a hothouse. A special premium. Awarded a Diploma.

502. Fourth premium to M. RYAN, Sonoma, for Orange and Lemon trees bearing fruit. Some fine specimens of fruit exhibited by J. W. Gale & Co., were from Mr. Ryan. Awarded a Diploma.

598. Fourth premium to Dr. B. F. HEADEN, Santa Clara, for sample of unfermented Grape juice. Awarded a Diploma.

423. Fourth premium to ROBERT WILLIAMSON, Sac. for samples of White Potatoes raised in California, (English Flunket and Early Goodrich). Awarded a Diploma.

760. Fourth premium to J. O. BROWN, for large Sweet Potatoes. Awarded a Diploma.

481. Fourth premium to S. HUFF, San Leandro, for mammoth Squash. Awarded a Certificate.

228. Fourth premium to Mr. HOSENBERG, Sacramento, for fine California Almonds. Awarded a Diploma.

229. M. Hosenberg Two Mediterranean Squashes, favorably noticed. Awarded a Diploma.

426. Fourth premium to BOGGS, Bros., Sherman Island, for samples Citrons, Watermelons and Potatoes. Awarded a Diploma.

569. Fourth premium to DAVID D. BERNARD, for carved Watermelons.

276. Fourth premium to E. A. UPTON, San Francisco, for fine display of Dahlias and Plants. Awarded a Diploma.

Also fourth premiums to the following exhibitors:

726. W. S. JACKS, Napa City, Italian Chestnuts. Awarded a Diploma.

778. R. G. PERKINS, specimen of Japanese Tea Plant. Awarded a Diploma.

H. F. HUTCHINSON, Ramie Plant and Fibre. Awarded a Diploma.

817. D. L. PERKINS, 146 varieties of Seeds.

418. JAS. B. WELTY, Yolo County, sample of Mulberry trees 2 years old. Awarded a Certificate.

590. MRS. HILDENHAGEN, St. Petersburg, Russia, Russian Cigaritos. Awarded a Diploma.

J. HARMON, Sonoma Co., fine specimens of Apples, too late for competition. Favorably noticed.

E. BROWN, Onisbo, fine specimen of highly colored pound Pears, too late for competition. Favorably noticed.

B. S. FOX, San Jose, 25 varieties of choice Apples, too late for competition. Favorably noticed.

A. RYAN, Sacramento River, fine specimen of Pears, too late for competition. Favorably noticed.

Probably no other department of the exhibition has required as constant watchfulness as that of the Fruits and Flowers. Fully appreciating the efforts of those in charge of them the Committee desire to express their thanks to Mr. E. J. Cummings, for his commendable management of, and attention to the fruit exhibit, and for the assistance he rendered them in the performance of their duties. Also, to Mr. Thos. Appleby, for the care he bestowed upon his unique display of cut flowers.

All of which we respectfully submit.

SAMUEL GRAVES, }
J. W. SHAEFFER, } Committee.
H. S. BLOOMER, }

NOTE.—Mr. D. L. Perkins, of Sherman Island, made a fine display of California Seeds of his own raising, being 146 varieties. The Board of Managers awarded him for this exhibit, a Silver Medal.

Report of Committee.

CLASS XX.

SECTION 2.

NATURAL AND MANUFACTURED PRODUCTS,

Comprising Flour, Wheat, Grain, Seed, Bread and Crackers, Fresh and Dry Maccaroni, etc., Spices, Mustard, Coffee, Chickory, Preserved Fruits, Fish, Meats, Vegetables Pickles, Vinegar, Sugar, Sandy, Syrups, etc.

62. J. C. Merrill & Co., 4 kegs of sugar (samples).
62. Ravenna, Ghiradelli & Co.
87. Boston Cracker Bakery, crackers and cakes in great variety.
89. George E. Ball, samples of salad dressing.
220. Bowen Bros., Samples of groceries and liquors.
251. Boston Cracker Co., samples of cakes and crackers.
257. California Pickle Factory, samples of pickles and catsup.
258. California Pickle Factory, samples of Bellmer's California sauce.
279. D. F. Adams, fruit vinegar.
393. Mrs. E. D. Hale, Stockton 23 glasses of assorted jellies.
397. D. R. Provost, 8 packages of California grape wine vinegar.
360. Henry Lake, sample of salad oil.
416. J. S. Harbison, Sacramento section boxes and case of white Mountain honey.
457. H. C. Hudson & Co., assorted spices, oils, mustard cake, mustard and mustard oil, manufactured at their own mills in San Francisco.
511. H. J. Clayton, California chutney sauce solid dressing and sandwich preparations.
557. California Sugar Refinery, case of 9 samples of sugar, including 13 cakes of A 1 sugar, 24 bottles of syrups, samples in barrels, 1-2 barrels and boxes, and syrup in kegs.
597. Marden & Myrick, samples of raw, roasted and ground coffee and spices.
610. Dr. J. Strentzel, Martinez, 6 bottles of wine vinegar.
626. Coghill, Lyons & Co., samples of starch, corn starch, maizena, satin gloss and superior.
629. D. Ghirardelli & Co., samples of spices, cocoa, mustard, chocolate, cream of tartar, coffee, broma, etc.
633. Brignardello, Macchiavello & Co., farina, Italian paste and maccaroni.
660. Samuel Nesbit, samples of bread.
710. F. Kirsten, specimen of confectionary decoration.
848. John D. Feldbush, 22-pound loaf of German bread.
939. George A. Brach, Decorated Confectionary.
940. Oakley & Co., Crackers, Wheat, Hominy, etc.

To the President and Board of Managers of the Seventh Industrial Exhibition of the Mechanics' Institute, of the City of San Francisco.

The undersigned Committee, appointed to examine articles exhibited and competing for Premiums at the above Exhibition, in Class 20, Section 2, do recommend the following Premiums to be awarded, to wit:

629. First premium to D. GHIRARDELLI & Co., for Chocolate Cocoa and Broma.

For excellence of quality of goods and articles mentioned above, manufactured by Messrs. D. Ghirardelli & Co., we assert that they are not excelled by any imported articles and recommend that a Gold Medal be awarded to Messrs. Ghirardelli & Co., as a suitable reward for their enterprise and perseverance. Awarded a Silver Medal

633. Second premium to BRIGNARDELLO MACCHIAVELLO & Co., for Farina, Italian Paste, Macaroni and Vermicelli.

We recommend highly the articles exhibited by Messrs. B. M. & Co., as of superior quality and deserving of special notice. Awarded a Silver Medal.

251. Second premium to BOSTON CRACKER COMPANY, for a superior quality of Cakes and Crackers. Awarded a Silver Medal.

557. Third premium to CALIFORNIA SUGAR REFINERY, for Sugar and Syrups. Awarded a Diploma.

457. Third premium to H. C. Hudson & Co., for a superior quality of mustard and spices. Awarded a Diploma.

511. Third premium to H. J. CLAYTON, for Salad dressing and Chutney sauce. Awarded a Diploma.

597. Third premium to Messrs. MARDEN & MYERICK, for samples of best Coffee. Awarded a Diploma.

393. Third premium to Mrs. E. D. HALL, for samples of assorted Jellies. Awarded a Diploma.

416. Third premium to J. S. HARBISON, for white Mountain Honey. Awarded a Diploma.

610. Third premium to Dr. J. STRENTZEL for wine vinegar. Awarded a Diploma.

360. Third premium to HENRY LAKE for sample of Salad Oil. Awarded a Diploma.

Third premium to GEORGE A. BRACH, samples of decorated Confectionary. Awarded a Diploma.

257. Third Premium CALIFORNIA PICKLE FACTORY for samples of Pickles and Sauces Awarded a Diploma.

Fourth premiums to the following exhibitors:

626. COGHILL LYONS & Co., Samples of Starch and Maizena.

230. BOWEN BROS. " " Groceries &c.

46. J. C. MERRILL & Co., " " 4 kegs S. I. Sugar.

All of which we respectfully submit, this Twenty-second day of October, 1869.

R. E. ROWLAND.
GEO. F. SILVESTER. } Committee.
MICHAEL TUBBS.

SAN FRANCISCO, Oct. 22d, 1869.

To the President and Board of Managers of the Seventh Industrial Exhibition of the Mechanics' Institute, of the City of San Francisco.

The undersigned, after making their report, in Class 20, Sec. 2, find that Messrs. OAKLEY & Co., have exhibited samples of Cracked Wheat, Hominy, Corn Meal, Oatmeal, etc. etc., which were omitted on our printed list, for our examination. We have since examined the same and recommend that they be awarded a third premium for the above articles. Awarded a Diploma.

397. There were also awarded to D. R. PREVOST, best display of Wine Vinegar. A Diploma.

87. Boston Cracker Bakery, Crackers and Bread. A Diploma.

Yours Respectfully,

R. E. ROWLAND.
GEO. F. SILVESTER,
MICHAEL TUBBS.

Report of Committee.

CLASS XX.

SECTION 3.

COMPRISING: WINES, BRANDIES AND VINOUS PRODUCTS.

- 66. Livingston & Co., case of German bitters.
- 169. John D. Robertson, 12 cases of bottled ale, porter, wine, and cider.
- 175. M. Deschamp, California wines and liquors.
- 199. F. Putzman, Prussian bitters in kegs and bottles.
- 238. Lake Vineyard Wine Co., samples of wines and liquors.
- 244. I. Landsberger & Co., samples of California wines and liquors.
- 259. A. Bona samples of Squarza punch.
- 263. Phister, & Kittleburger, samples of punches of all kinds.
- 268. McMillan & Kester, syrups, bitters, cordials, essences.
- 314. C. J. Leiding, Sonoma, cases of wine.
- 373. L. Gross & Co., 6 dozen bottles of I. X. L. bitters.
- 374. L. Gross & Co., 2 1-2 dozen bottles of O. K. bitters.
- 483. W. H. Rhea & Co., samples of whisky in kegs and bottles.
- 498. Eberhardt & Lachmann, samples of sparkling California Wine.
- 506. N. Keefer & Hollander, 196 Canal street, New Orleans case of Malakoff bitters.
- 507. Frank Siebert, Nevada City, California wines and liquors.
- 520. F. & P. J. Cassin samples of Cassins grape root bitters and grape brandy.
- 595. Dr. J. H. Wood, Napa, case of Pearl Hock wine.
- 367. B. F. Heden, unfermented grape juice.
- 599. B. F. Heden, Santa Clara, 7 bottles of unfermented grape juice.
- 609. Dr. J. Strentzel, Martinez, 6 bottles of wine.
- 741. Remmel & Otersen, samples of Sonoma wine and brandy.
- 757. Vintage Brandy Co., 2 casks of brandy.
- 758. S. Marks, samples of ale and porter, in wood and glass.
- 850. M. Deschamps, Traveler's Friend—9 bottles of Wines and liquors.
- 919. A. Finke, samples of sparkling California wine.
- 921. Charles Langley & Co., samples Renze herb bitters.

To the President and Board of Managers of the Seventh Industrial Exhibition of the Mechanics' Institute, of the City of San Francisco.

The undersigned Committee, appointed to examine articles exhibited and competing for Premiums at the above Exhibition, in Class 20, Section 3, do recommend Premiums to be awarded, to wit.

To FRANK SIEBERT (Nevada City) for best White Wine (Charsales.)

To C. J. LEIDING for best Red Wine (Zinfandella) special mention.

To A. Finke for best Sparkling California Wine.

To FRANK SIEBERT (Nevada City) for best (Grape Wine) Brandy.

To F. P. J. CASSIN for best (Wild Grape Root) Bitters.

To W. H. RHEA & Co., Old Copper Distilled Whiskey (no competition) favorable mention.

- To Mc MILLAN and KESTER best exhibition of Syrups, Cordials and Essences.
 To I. LANDSBERGER best 2d class White Wine, (Sonoma.)
 To Lake Vineyard Wine Co., best 2d class Red Wine (Quiquiriqui.)
 To I. LANDSBERGER best 2d class Sparkling California Wine.
 To Vintage Brandy Co., best 2d class (Cognac) Brandy.
 To F. & P. J. CASSIN best 2d class (Grapo Brandy) Bitters.
 To LYON & Co., for Bottled Ale, Porter favorable mention.
 To I. LANDSBERGER best 3d Class of White Wine. (Riesling)
 To M. DESCHAMPS best 3d Class of (Cal.) Brandy.
 To L. GROSS & Co., best 3d Class of (I. X. L.) Bitters.
 A. BONA for Whiskey Punch.
 LAKE VINEYARD Wine Co., best 4th Class of White Wine. (Quiquiriqui)
 F. PUTZMAN best 4th Class of (Prussian) Bitters.

AWARDS IN CLASS XX, SEC. III.

507. FRANK SIEBERT. Nevada City for the best Red Wine and Brandy. native Silver Medal.

314. C. J. LEIDING. Sonoma Red Wine. (Zinfandello) Diploma.
 A. FINKE. Sparkling California Wino. Diploma.
 520. F. & P. J. CASSIN. Wild Grape Root Bitters. Diploma.
 483. W. H. RHEA & Co. Old Copper Distilled Whiskey. Diploma.
 I. LANDSBERGER. Sparkling Cal. wine. Certificate.
 244. I. LANDSBERGER & Co. White Wine. Certificate.
 286. Mc MILLAN & KESTER. Syrups, Essences and Cordials. Diploma.
 238. LAKE VINEYARD Co. Red Wine. Certificate.
 520. F. & P. J. CASSIN. Grape Brandy Bitters. Certificate.
 169. LYON & Co. Ales and Porter, bottled by J. D. Robertson. Certificate.
 850. M. DESCHAMPS. California Brandy. Certificate.
 373. L. GROSS & Co. I. X. L. Bitters. Certificate.
 506. M. KEEFER & HOLLANDER. New Orleans Malakoff Bitters. Diploma.
 259. A. BONA. Whiskey Punch. Certificate.
 199. F. PUTZMAN. Prussian Bitters. Certificate.

All of which we respectively submit,

T. MCCARTHY,
 H. CANNANAN,
 DAVID WOGSTER, } Committee.

Report of Committee.
 CLASS XXI.

MISCELLANEOUS ARTICLES NOT COMPRISED IN ANY
 OF THE FOREGOING CLASSES.

26. J Armstrong, patent room heater, using a common coal oil lamp.
 38. Frank Eckenroth, model of eastle made with eards.
 98. John Alsop, ease of parasols.
 112. Alfred Jeffery, ease of stuffed birds.
 184. Mrs. G. O. Perry, eathedral wateh ease, made from ant eaten wood, found at Silver Lake, Amador County.
 188. Alfred Weiner, collection of foreign postage stamps.
 190. J. D. Barr, 2 cases of umbrellas and parasols.
 193. Robert Varney, 2 charts of the sovereigns of England.
 250. Dr. J. P. H. Vandenberg, ease of tape worms.
 254. Holland Smith, Declaration of Independence in Chinese.
 262. A. Weyer, specimen of silk and woolen seouring.
 285. Hubert Burgess, 3 sets of the National system of drawing.
 334. Fairbanks & Hutehinson, Baldwin's patent money drawers.
 345. H. True & Co., exhibition of the working of Holmes' burglar alarm telegraph.
 348. Captain Blethen, letter from the Rev. John Wesley.
 361. V. S. W. Parkhurst, 2 White's patent money drawers.
 362. V. S. W. Parkhurst, U. S. combination lock.
 431. Miller & Loud, door with elastic springs.
 478. J. S. Coleman, M. D., Stockton, samples of Dr. Coleman's tobaccoo antidote.
 552. E. F. Lorquin, specimens of stuffed birds and animals, shells, etc., and samples of plumes for hats.
 561. John F. Snow, specimen of glove and feather cleaning and dyeing, and specimens of fur cleaning.
 584. Dewey & Co., Patent Office and other models.
 592. W. J. Stoddard, California wild cat, killed May 18, 1869, within 18 miles of San Francisco. Weight, when killed, 28 lbs.
 655. George Schmidt, Root from a grave bed near Mt. Hood, Oregon.
 656. George Schmidt, horn from the moose, eastern side of the Rocky mountains.
 663. H. L. Wempe, tin miniature fort, aquarian water power, etc., made by exhibitor,
 674. George Boyne, from Fiji Islands—fans, wigs, canoes, petticoats, bows and arrows, bamboo bottles, fishing nets, mats spirit house, cannibal forks, priestse, bowl, baskets, fish hooks, war clubs, nose flutes, chief's pillow, model of war canoe, cloth from fibre of mulberry tree, and sail needle—collected by exhibitor during a 3 years residence in the Fiji Islands.
 667. C. H. Campe, 3 drawings of elements of human body.
 688. G. H. Hopper, head of walrus or sea horse.
 708. Thomas Allen, agent of C. P. R. R. Davisville, stiek of wood with piece of iron imbedded therein, found at Davisville, C. P. R. R.

- 721. D. N. Robinson & Son, specimen of Alaska sponge.
- 735. J. F. Dennell, specimen of Jack knife work.
- 752. George B. Hess, ball of tin foil.
- 782. A. Zeehandelaar, chart of the flags of the different Japanese princes and their annual incomes.
- 816. R. L. Harris, \$5 piece crushed by the first engine on the last rail, May 10, 1869.
- 928. Miss Ella Cornell, 1 air castle.
- 516. H. C. Door, sample of Chinese medical preparations.
- 111. Ephraim Vorbes, combination lock, California manufacture.
- 864. Kittridge and Leavitt, combination bank vault and safe locks, California patent.
- 892. Miss Lulu Kewen, string of buttons.
- 906. " Ella Shakespeare, string of buttons, (800).
- 920. John L. Boone, specimen easy threading needle.
- 942. Wan Yune Lung Kee, teas, Chinese flowers and fancy articles.
- 908. Lyons Bros., parasols.

*To the President and Board of Managers of the Seventh Industrial Exhibition of the
Mechanics' Institute, of the City of San Francisco:*

The undersigned Committee, appointed to examine articles exhibited and competing for Premiums at the above Exhibition, in Class 21, do recommend the following Premiums to be awarded, to wit:

After a careful study of the articles submitted for their inspection, your committee feel flattered, that they should be selected to pass on a class having such a wide range and to which no doubt you thought no person of ordinary minds could do justice.

The antique and romantic as represented by a Castle made of cards which like those of old, made of stronger stuff, will not out-last its day and generation.

Of the same order and of equal importance, is the Air Castle, made of thread and straw, the handy work of a young lady, no doubt representing the unreality of Loves young dreams, or the net she would set to catch the winged boy, we wish her success, that is the married portion of your committee, our bachelor committee men could not be brought to do the young ladies' exhibit justice, seeming to fear some trap to bring such as him to grief.

The tin tort should have been exhibited a few years ago when wars' alarms made such things interesting.

The collection of foreign postage stamps showing Emperors, Kings and Presidents with black eyes, heads smashed, and otherwise, made to look like guys, is also very interesting.

Why are young girls given to collecting strings of buttons? Do they dream of husbands and sons who will need them? if so they should be encouraged by the Institute.

Also encourage the boy with the jack knife work, it is the budding of mechanical genius, who can tell but he may one day become a Coleman, Pardy, Pease, Hanscom, or Wilcox. Give him a chance.

The Chinese medical preparations to be tested must be tasted, and the statement of the incomes of the Japanese Princes if translated into English would not be believed; so your committee refrains. If you have any to spare, send each Prince a gold medal.

The merit of the bale of tin foil lies in the center—cannot be told. We recommend you to devote one evening to unrolling it, and fill up another sheet with a description of what you find.

The Feejee Island exhibit of all the trumpery picked up by the exhibitor in three years is very interesting, we would recommend that you send to the chief of these Islands a diploma by the fastest member of your board.

But gentlemen the department of natural history engaged our special attention. The "Wild Cat shot within 18 miles of San Francisco;" the excitement of the chase, the joy at the fatal shot, the pride of the hunter and the stories to be told for years to come, are represented here, but all these pale before the show of Tape worms; how proud must be the possessor of such a collection! think of the excitement of such captures, the cautious approach, the slow drawing of the enemy from out his strong hold! no wonder those who have been thus engaged stand in crowds around this exhibit. Gentlemen give every one who gave birth to one of these interesting creatures a diploma, really the merits of such an exhibition in a Mechanics' Fair cannot be stated.

The Sponge from Alaska, the Head of a Sea Horse, and Horn of the Moose, and nut-eaten wood, were very dry and cost your committee two bits.

Our class being Miscellaneous we find each article possessing merit in its way, without conflict with the other.

E. F. Lorquin case of stuffed birds animals.

J. D. Barr's two cases of Umbrellas and Parasols.

A. Meyers specimens of silk and woolen cleaning.

John F. Snow Feather, Fur, and Glove cleaning.

V. S. W. Parkhurst's money drawers and U. S. Combination Lock.

H. True & Co. exhibitions Burglar alarms Telegraphs.

Fairbanks & Hutchinson money drawers.

Kittredge & Leavett's combination lock, and to which we give preference on other locks on exhibition.

AWARDS IN CLASS XXI.

262. A. WEZER. Silk and Woolen Cleaning. Diploma.
 285. HUBERT BURGESS. National System of Drawing. Diploma.
 912. WAN YUN LUNG KEE. Teas, Chinese Flowers and Fancy Articles. Diploma.
 552. E. F. LORQUIN. Stuffed Birds, Animals etc. Diploma.
 190. J. D. BARR. Umbrellas and Parasols. Diploma.
 908. LYONS BROS. Parasols. Certificate.
 561. JOHN Y. SNOW. Specimens of Feather and Glove cleaning. Diploma.
 361. 362. V. S. W. PARKHURST. Money draw and Combination lock. Diploma.
 864. KITTEREDGE & LEAVILT. Safe Lock. Diploma.
 345. H. TRUE & Co., Burglar Alarm Telegraph. Diploma.
 334. FAIRBANKS & HUTCHINSON. Money Draw. Certificate.

JOSEPH BRITTON, {
 HORACE D. DUNN, { Committee
 R. B. FORDHAM, {
 H. S. SMITH, }

CATALOGUE.

	No. Cl. Sec.		No. Cl. Sec.
Adams, D. F.	279 20 2	Berry & Place,	133 1 2
Adams, D. F.	602 20 1	Bessey, Mrs. Rosenz	70 19
Adams, R. M.	317 18 2	Betts, Wm. M.	429 13
Adams, Q. L.	489 11	Bickford, E. C.	496 8
Actna Foundry, (Hanscom Co.)	21 4	Bickford, E. C. & Co.	301 4
" " " "	20 1 2	Biggs & Gardner,	913 10
" " " "	22 3	Black & Miller,	469 13
Albion Pottery,	441 9	Blacke, Miss Emma	147 16 4
Alexander, Mrs.	343 19	Blake & Co.	234 18 2
Alsop, John	98 21	Blanche, Miss Emma, from 114 to	120 16 1
Allen, Thomas	708 21	Blanchard, Miss Marion	907 16 4
American Saw Company,	253 7	Blethen, Captain	347 18 1
Andrews, E.	607 20 1	Blethen, Captain,	348 21
Appleby, Thomas	634 20 1	Blyth & Wetherbee,	252 15
Armstrong, J.	26 21	Boezl, B.	273, 274 18 1
Arnold, F. W.	884 8	Boggs, Bros.	426 20 1
Arthur, J. D. & Son	513 4	Bohn John	460 7
Asphaltolin Pipe Co.,	383 5 3	Bolza, W.	108 16 1
Atwell, H. Wallace	928 7	Bona, A.	259 20 3
	929 16 4	Bonney, Jr.	424, 425 4
Atwood & Bodwell,	344 2 2	Boone, John L.	920 21
Axtell, Henry	208 7	Booth, H. J. & Co.	824 1 1
Ayers, Mrs. Mary Ann	161 19	" " "	866 1 1
Ayers, Ellis	224 7	" " "	667 2 2
		Boston Cracker Co.	251 20 2
		Boston Cracker Bakery,	87 20 2
		Bowen, Bros.	230 20 2
Bagge, Theodore	678 20 1	Bowker, J. W.	388 1 1
Bagley, C. O.	464 7	Boyd & Co.	239 10
Bailey, L. H.	232 19	Boyle, D.	729 12
Bailey, C.	73 16 1	Boyne, George	674 21
Baker & Hamilton,	539 4	Brach, George A.	939 20 2
" " " " from 542 to	547 4	Bradley & Rulofson, from 244 to	269 16 1
Baker & Hamilton,	540 14	Braun, A. E. H.	280 6
" " " " 692, 693,	694 4	Briggs, William	62 and 63 16 1
" " " "	541 2 1	Brignardello, Macchivello & Co.	633 20 2
" " " "	718 1 1	Brittan, Holbrook & Co.	440 7
" " " "	548 1 2	Broderick & Kast,	615 14
Baker, Mrs. A. D.	549 14	Brodie, James,	916 2 1
Baker, G. H.	902 12	Brooks, Albert M.	65, 66, 67 16 1
Ball, George E.	89 20 2	Brooks, Samuel M. 77, 78, 79, 80, 81, 82	16 1
Ballou, H. G.	47 18 2	Brooks, Henry	855 and 873 18 1
Bannon, —	836 19	Brown & McDowell,	297 12
Bancroft, H. H. & Co.,	197 12	Brown, G. S.	315 10
Bancroft, H. H. & Co.	851 15	Brown, T. S. & T. A.	699 4
Barr, —	240 14	Brown, Bros. & Co.	650 18 1
Barker, Dr.	152 10	Brown, Mrs. Richard	797 16 4
Barnes, E.	661 4	Brown, J. O.	760 20 1
Barton, B. F. & Co.	402 10	Brown, E.	925 20 1
Bartram & Fanton,	479 19	Brown, J. E.	605 20 1
Barr, J. D.	190 21	Brush, Geo. A.	349, 350 16 3
Barron, Capt.	812 19	Bucklelew, Frank	675 8
Bassett, N.	749 11	Burgess & Stratton	526, 537 12
Bayley & Winter,	from 274 to 317 16 2	Burgess, Geo. H.	from 47 to 54 16 1
Beam, P. G.	659 12	Burgess, Hubert	285 21
Beatie, Rob't C.	847 10	Burns, T. W.	384 1 1
Behrendt, H. & Co.	275 14	Burnett, H. A.	58 20 1
Belduke & Sicotte,	842 13	Burnham, A. W.	430 13
Belle, Dr. E.	505 6	Bush, Norton	from 88 to 96 16 1
Bennet, Mrs. H. W.	497 16 4		
Berry & Place,	from 129 to 132 2 1	Cabery, H. R.	611 18 2

	No.	Cl.	Sec.		No.	Cl.	Sec.
Cadue, P.	918	13		Day, George A.	8	2	1
California Wine Cooperage Company.	761	8		De Bendleben, O.	103, 104, 105	16	1
California Business University,	737	6		De Berard, David	569	20	1
"	319	16	2	Deere, John	784, 785	4	
" Sugar Refinery,	557	20	2	Deerhand, D.	104	16	4
" Pickle Factory,	257, 258	20	2	Denny, G. J.	from 23 to 31	16	1
" Silk Culture Co.	821	18	2	Derome & Strout,	209	15	
" Powder Works,	256	5	2	Deschamps, M.	175, 850	20	3
Campbell Murdoch,	25	5	1	Dewey & Co.	582, 583	12	
Campe, C. H.	667	21		"	585	10	
Cameron C. P. & A. A. Goddard,	737	18	2	"	586	8	
Capitol Woolen Mills,	272	18	1	"	584	21	
Carpenter, Mrs. M.	158, —	15		De Wolf, B. J.	255	16	3
"	159	5	1	Doherty, Mrs. M. E.	312	16	4
Carpenter, Miss M. P.	653	8		Dor, H. C.	516	21	
Casebolt & Kerr,	303	13		Dndley, E. T.	334	16	2
Casebolt, George T.	287	11		Duncan, Mrs. P. A.	728	16	4
Cassin & Proctor,	518	7		Dwyer, J. P.	318	16	2
Castro, Nicholas	42	5	1				
Castagnino, L.	618	2	1	Eberhardt & Lachmann,	498	20	3
"	619	15		Eckenroth, Frank	38	21	
Case, Miss Effie	335	16	2	Elam & Howes,	88	8	
Caswell, Mrs. E. E.	476	19		Ellis, Mrs. George	781	16	4
Cassin, F. & P. J.	520	20	3	Entz, F.	137, 138	19	
Challenge Soap Co.	664	10		Ettinger, M.	904	18	2
Chandler, Mrs. Fanny P.	182	19		"	905	2	1
" Robert	34	19		Eureka, Wadding, Batting and Comforter Manufactory	493	18	1
" W. S.	18	19					
"	19	16	4				
Cherry, John W.	471	16	3	Fairbanks & Hutchinson,	333	6	
Chureh & Clark,	49	5	2	"	334	21	
Clapp, Dr. G. H.	743	10		Falk, B.	207	14	
Clark, C. J.	61	10		Fareiot, Charles O.	270	1	1
Clark, M. & Son,	371	9		Feldbush, John D.	848	20	2
Clark, M. & Co.	370, 372	5	3	Ferris, John H.	59	20	1
Clark, J. W.	719	4		Figel, S.	495	18	2
Clark, W. H. T.	39, 40	1	2	" Joseph	621	18	2
Clark, Geo. W.	555	15		Figer, Bros.	311	8	
Clark,	634	15		Finke, A.	919	20	3
Clark, Mrs. H. H.	733, 734	19		Flint, W.	614	20	1
Clark, Robt. G.	417	20	1	Flint, Thomas B.	932	20	1
Clay, J. P.	176	5	3	Flint, T. B.	295	18	2
Clayton, H. J.	511	20	2	Folleau & Mabou, Drs.	414, 415	6	
Clisly, Mrs. S. A.	100	16	1	Forbes, A. J.	510	15	
Cofley, G. W.	354	3		Ford, L. W.	323	16	2
Coffin, Mrs. G.	346	16	4	Ford, J. T.	2	2	1
Coghill, Lyons & Co.	626	20	2	"	3	1	1
Coleman, Dr. J. S.	478	21		Forsman, Mrs. H.	313	19	
Coleman, E. C.	912	5	3	Foster, C. H.	271	7	
Coleman, J. E. W.	531	19		Frankenbaeh, Miss Eva	487	19	
Coleman, Ezra	312	8		Feman, Benjm. F.	589	5	3
Cole, N. P. & Co.	200	15		French & Co.	519	14	
Corns, Henry	198	15		Friedlander & Co.	356	19	
Conly, Mrs. Owen	765	19		Friehhofer, Paul	217	13	
Constable, John L.	636	1	1	Fugazzi, J. F.	154	10	
Cook, M. M. & Son	1000	14		"	156	9	
Cook, Mrs. C.	264	11		"	155	5	1
"	265	16	4	Fuller & Co.	624	1	1
Cooke, Matthew	335	7		"	221	1	2
Corbusier, Mrs.	269	18	2				
Cordillera Mining Co.	757	10		Gabel & Co.	494	10	
Cornell, Miss Ella	828	21		Gage, J. C.	681	14	
Craig, John	837	13		Gale, J. W. & Co.	502	20	1
Cramer, Geo. R.	404	13		Gale, Morgan	27, 28	7	
Crane & Brigham,	390	10		Gallagher, Weed & Co.	353	7	
Crammer & Holden,	696	5	2	Galpen, Edw. & Co.	893	14	
Crandall Patent Spring Bed Co.	195	15		Gambert, L.	342	20	1
Crawford, A.	from 704 to 707	5	1	Gardner, Charles	202	15	
Croeker, J. G.	669	12		Garey, Thomas A.	291, 292	18	2
Cubery & Co.	231	12		Garland, M. H.	628	10	
Culver, J. H.	579	7		Garratt, Wm. T.	576	5	2
Currier & Winter,	732	7		Garrett, W. J.	574	5	7
Cushing, V.	463	1	2	Garvey & Kimball,	443	7	
Cutter, S. L.	701	5	2	Gates, Justin & Bros	731	10	
				George Mrs. L. F.	697	19	
Daggett, Mrs. John J.	803	16	4	George, F. S.	125	20	1
Daggett, Mrs. J. C.	695	19		"	126	18	2
Dana & Coddington,	166, 168	10		Gerhard, J.	157	15	
"	167	15		Ghirardelli, D. & Co.	629	20	2
Danneberg, Mrs.	328	19		Gilbert, Mrs. Julius A.	50	19	
Daniel, John	801 802	5	3	Gilmore & Van Norden	743	12	
Darling, Wilkie	894	1	1	Goddard, A. F.	739	18	2
David, August	683	7		Goldberg, Madame C.	515	19	
Davis, Mrs. W. J.	845	16	4	Golsh, A.	107	10	
Davison & Co., G. A.	63	4					

	No. Cl. Sec.		No. Cl. Sec.
Goodall & Nelson,	60, 61 16 1	Holtzman, F.	99 16 1
Goodwin & Co.	568 15	Hooker, W. D.	627 1 2
Gould, L. A.	601 12	Hopkins, M. P.	23 2 2
" "	600 20 1	Hopkins, Mrs. E.	44 19
" "	368 20 1	Hopper, G. H.	688 21
" "	716 1 1	Horne, Miss E. M.	320 16 2
Graves, H. T.	577 7	Horner, J. M.	876 8
" "	578 15	Hosenberg, M.	228, 229, 20 1
Gray, Joshua	399 7	Hosmer, D. M.	783 3
Gray, Miss J. T.	873 19	Houghton, F. T.	140, 141, 142 7
Greenall, J. S.	606 20 1	Houghton, F. T.	815 14
Gross, L. & Co.	373, 374 20 3	Houseworth, Thos. & Co.	
Grover & Baker,	633 19	from	148 to 171 16 2
Gump, S. & G.	789, 788, 9	Housman, Capt. J.	200 5 1
Gustafson, Gustaf	319 4	Howard, Mrs. V. E.	— 16 4
Haas, Mrs.	480 20 1	Howard, M.	237 10
Hallidie, A. S.	570 5 3	Howe Machine Co.	622 19
Hallidie, A. S.	573 9	Howes, Geo. & Co.	113 16 1
" "	571 5 1	Hourcade, A.	113 12
" "	572 2 2	Hucks & Lambert,	48 10
Hahne & Co., A.	93 18 1	Hudson, H. C. & Co.	457 20 2
Halc. Mrs. E. D.	393 20 2	Huff, S.	481 20 1
Hall, David F.	118, 119 18 2	Hughes, W. H.	219 13
Hall, Thomas J.	444 8	Hunter & Weister,	194 4
Hammond, J. C.	830 7	Huntington, Mrs. H. S.	338 16 2
Hansen, F.	712 5 1	Huntington, F. A.	433 2 1
Hansen, F.	713 19	Hutchinson, H. F.	392 20 1
Harbison, J. S.	416 20 2	Hutchinson, Dr. D. S.	110 11
Harmon, J.	924 20 1	Hutchinson, J.	454 18 1
Harris, Benj.	5 4	Jacks, W. S.	726 20 1
Harris, R. L.	816 21	Jacks, W. S.	727 12
Harris, R. L.	784 1 1	Jackson, Otis	358 2 1
Hartshorne, E. F.	115 15	James, Thos. B.	869 10
Hartshorne, E. F.	114 12	Jeffrey, Alfred	112 21
Rasbrouck, Mrs.	843 19	Jenkins, Charles H.	299 15
Hass, Martin L.	554 16 2	Jessup, T. C.	210 11
Hatch, J. G. & Co.	477 10	Johnson, William	302 16 4
Hatton, & Co., A.	559 8	Johnson, J. B.	56 2 2
Hawley, M. C. & Co.	638	Joiner, John J.	235 11
639, 640, 641, 642, 643,	4	Jones, Mrs. R. L.	724 19
Hawley, M. C. & Co.	644, 645, 646 4	Jones, Mrs. R. L.	725 10
Hawley, M. C. & Co.	647 8	Jones, T. G. H.	103 20 1
Hayne, W. M.	101, 102 20 1	Jones, William	269 7
Hayne, W. M.	846 4	Jones & Wooll,	799 11
Haynes & Lawton,	755 9	Jones & Wooll,	798 15
Haynes, Mrs. Benj.	500, 556 16 4	Jones & Wooll,	71, 72 16 1
Haynes, Mrs. Benj.	730 19	Jordan, Miss Anna H.	149 19
Haynes, Mrs. Benj.	807, 808 16 4	Joseph Bros.	462 18 2
Headen, B. F.	367 20 3	Kahn, H.	722 16 4
Headen, B. F.	598 20 1	Keefer & Hollander,	506 20 3
Headen, B. F.	366 20 1	Keep & Bargion,	657 1 1
Hendee, E. B.	759 4	" "	658 1 2
Henter, G.	290 10	Keller, Mary	42, 43, 44, 45 16 1
Hepburn, W. H.	649 3	Kelley, P.	871 14
Herrick, W. F.		Kennedy, John E.	205 5 1
(for A. C. Carey),	899 18 1	Kerr, James A.	from 83 to 87 16 1
Herrick, L. D.	488 7	Kervan, Miss Lula	892 21
Herrick, L. D.	422 5 1	Kimball Manufacturing Co.	380 13
Herrick, W. F.		Kindelberger, J. &	
(for Mann & Brace)	897 10	W. A. Arnold,	436 7
Hess, Geo. B.	752 21	Kindleberger, J. &	
Hibbard, Sandborn & Co.	446 5 3	W. A. Arnold,	437, 438 2 1
Hicks, D. & Co.	563 12	King, Mrs. J. A. B.	17 19
Hicks, E. P.	106 4	Kirk, Mrs.	266 19
Hitchcock, Geo. B.	80, 81 12	Kittridge & Leavitt,	864 21
Hittell, Mrs. T. H.	765 29 1	Kittridge Jonathan	533, 534, 535, 7
Hildenhagen, Mrs. & Co.	590 20 1	Kittridge, Jonathan	— 2
Hilton, J. C.	887 11	Klain, N. M.	from 339 to 358 16 2
Hinckley, C. D.	181 15	Klumpke, Mrs. J. G.	105 19
Hinz, Carl	439 7	Knapp & Grant,	877 4
Hoadley, Sarah E.	64 19	Knowlton, J. J.	57 10
Hoag, I. N.	293 18 2	Knott, Richard	427, 428 4
Hoag, I. N.	294 20 1	Kohler, Chase & Co.	
Hoag, —	836 4	447, 448, 449, 450, 451 17	
Holden, E. S.	889 5 3		
Holed, G.	764 16 4		
Hollister, Mrs. S. E.	96 19		
Hollister, S. E. & J. J.	135 8		
" "	136 8		
Holt, Warren	122, 124 15		
Holt, Warren	123 6		

	No.	Cl.	Sec.		No.	Cl.	Sec.
Kohler, Chase & Co.	453	18	1	Mayhew, Mrs. J. A.	512	19	
Kohler, Chase & Co.,	452	15		McCarthy, D. O.	901	4	
Korbel, F. & Brother,	83, 84	8		"	844	2	2
Krause, Mrs. Anna	143	19		McClellan, Mrs Mary E.	213	19	
Ladies' Depository,	77	19		McDaniel, G. F.	316	14	
Lake, Henry	359	10		McDonald, M. I.	106	16	1
Lake, Henry	360	20	2	McDonald & Withers,	45	15	
Lake Vineyard Wine Co.	238	20	3	McKinzie, J. W.	927	5	1
Lamb, F. B.	407	8		McLeod, John	151	7	
Lamb, F. B.	409	7		McMillan & Kester,	268	20	3
Lamb, F. B.	408	4		Medena, Mrs. F. B.	172	19	
Lampe & Bros.	238	10		Medena, Mrs. F. B.	173	16	4
Landsberger, I. & Co.	244	20	3	Merkley, R. J.	196	20	1
Langley, Charles & Co.	921	20	3	Merrill, J. C. & Co.	46	20	2
Larkins & Co.	369	13		Meusdorffer, K.	286	18	2
Laswell, N. D.	671	1	2	Mayer, A.	262	21	
Latham, Mrs. C.	203	19		Mezzara, P.	From 121 to 133	16	2
Lawless, Bros.	396	14		Miledge, George	41	5	1
Lawson, P. A.	225	5	1	Millard, Hannah	97, 98	16	1
Lawton, Mich'l	215	1	1	Miller, Elias	492	15	
Lawton & Co.	465	13		Miller & Loud,	431	21	
Lawton & Co.	466	7		Mills, L. R.	Pacific Congress		
Lebetard, Michael	165	10		Water	185	10	
Lee, James	110	16	1	Mining & Scientific Press,	657	10	
Liebes, H.	934	18	2	Misgill & Cooper,	71	7	
Leiding, C. J.	314	20	3	Mitchell, Joseph Silver	826, 827,	16	2
Levet, Mrs. J. B.	738	16	4	Mitchell, Miss Kate	55	16	4
Levy, D.	560	16	3	Morgan, Geo. G. W.	271, 272	16	2
Lewis, D. G.	137	8		Morris, Murphy & Co.	375	4	
Lick, James	793, 794,	795	16	Morton, Mrs. H. E.	491	15	
Lilienfeld, Miss Viola	163	19		Mosse, D.	865	19	
Lindsey, Miss E. Isabel	74, 75, 76	16	1	Muller, Edward	72, 73, 74	18	2
Linforth, Kellogg & Rail.	442	1	2	Muller, Edward	136	20	1
Linforth, Paul	458, 459	12		Murphy, Mrs. Mary Ann	98, 99	19	
Litchman, Mrs. M. H.	273	16	2	Myers, A.	218	1	2
Little & Keading,	829	5	2	Myers, Leon R. & Co.	From 134 to 147	16	2
Litzins, A.	490	15		National Watch Co.	587	6	
Livingston & Co.	66	20	3	Nesbit, Samuel	660	20	2
Lloyd, G. A.	858	13		Nester, John	35	4	
Lloyd & Stewart,	860	5	1	Nestor, John	36	7	
Lloyd & Pctlow,	859	7		Nichols, J. S.	475	5	1
Locan & Co.	85	16	2	Nickerson, J. R.	612	20	1
Locher, C.	247	4		Noble & Gallagher,	378, 379	16	3
Lorquin, E. F.	552	21		Norcross & Co.	558	18	2
Louis, Edward	283	10		Nordgren, E. H.	863	20	
Lubbock, H. S.	341	20	1	Norton, Joseph	811	9	
Lucky, W. T.	911	15		Oakley & Co		20	2
Luke, Sam'l	856	5	1	Odermatt, Miss Mary	482	19	
Lunaberg & Marwedel	164	6		Odermatt & Ettlin	277	11	
Luny, James W.	239	16	3	O'Neil Thomas	550	9	
Lynch, —	613	5	3	O'Neil Thomas	551	16	2
Lyne, Wm.	357	2	2	Osborn R. F. & Co.	833 839	840	7
Lyon, Bros.	908	21		Otto Charles & Co	179	180	7
				Owens J. B.	329	7	
Magendie, Mrs. A. S.	82	19		Packard A.	296	18	2
Mahnz, Hugo	79	10		Pacific Business College	324	16	2
Main & Winchester,	90	14		Pacific Elastic Sponge Co.	566 567	15	2
Main & Winchester,	91	18	1	Pacific Glass Company	86	10	
Mackay, Alexander	170	18	1	Pacific Neck Tie Factory	930	18	2
Macy, G. G.	16	18	1	Pacific Oil & Lead Works	509	10	
Mallon, John	211	9		Pacific Pioneer Paper Collar Co.	931	18	2
Mallon & Boyle	212	16	2	Pacific Plate Works	756	11	
Malone & McMahan,	246	14		Pacific Pump Manf'g Co.	715	1	2
Manasse & Baker,	620	14		Pacific Rolling Mill Co.	432	7	
Mann & Bruce per W. F. Her- rick,	897	10		Pacific Saw Manufacturing Co.	672	7	
Marden & Myrick,	597	20	2	Pacific Sewing Machine Co.	623	19	
Marks, S.	758	20	3	Pacific Straw Works	580	18	2
Marsh, Pillsbury & Co.	822, 823	1	1	Pacific Straw Works	581	2	2
Martin, Miss Lizzie	154	19		Pacific Wood Preserving Co.	654	5	3
Martin, P.	434	5	3	Parker Mrs. W. H.	121	19	
Martin, H. B.	153	1	1	Parkhurst, V. S. W.	361 362	21	
Martin, H. B.	825	1	2	Parkhurst, V. S. W.	363	1	2
May, Mrs.	922	16	4	Parkhurst, V. S. W.	364	6	
				Parish Soap Works	403	10	
				Partiz, Prof. A. F. W.	445	10	

	No.	Cl.	Sec.		No.	Cl.	Sec.
Patch, Geo. W.	143	11		Rosenblatt, S.	562	18	1
Patten, Mrs. E. M.	890	16	4	Rosenthal, Toby	1 2 3	16	1
Patterson, J. W.	604	20	1	Ruben, George	736	7	
Payne, S. W.	875	29	1	Rudolph, William	405	5	2
Pellegrine, F.	806	16	3	Ruggles, Miss. A. H.			
Pennell, J. F.	735	21		Rumsey, Miss Florence	833	16	4
Pennie, Miss Mary	206	16	4	Ruthford, R. H.	891	16	2
Pereira, S. L.	189	13		Sanderson, Mrs S. A.	97	16	4
Perkins, J. G.	508	5	1	San Francisco Cordage Co.			
Perkins, R. G.	778 779	20	1	(Tubbs & Co.)	192	5	1
Perkins, D. L.	817 818	29	1	San Francisco Lead Pipe &			
Perkins, D. L.	820	16	2	Shot works,	467	7	
Perham, J.	120	7		San Francisco Plating Works,	625	11	
Perine, W. D.	109	20	1	Saufrignior, F. J.	338	20	1
Perine, W. D.	108	18	1	Saufrignior, F. J.	339	18	2
Perry, Mrs. G. O.	184	21		Saratogo Paper Mill	29	12	
Perry Robert	853	18	1	Sawyer, L. L.	216 322	4	
Peters, George	64	16	1	Sawyer, L. L.	742	4	
Peterson, M.	532	19		Sawyer, L. L.	484	15	
Pfeiffer, George	33	10		Saxton, David	337	16	2
Phelps, Bros.	183	7		Schmidt, George	655 656	21	
Phelos, Mrs. M.	693	19		Schoenestein, F. B.	31	17	
Philips, J. S.	636	6		Schrieber, Jacob	648	15	
Phister, & Kittleberger.	263	20	3	Schrinor, Mrs.	32	19	
Pioche, F. L. A.	857	10		Schuester Bros.	435	7	
Pioneer Paper Mills,	53	12		Scott, Miss. M. E.	754	12	
Piccaroli, F. G.	134	15		Scott, Mrs. M.	538	1	9
Pickering & Davis	524	13		Seoville, Ives.	386	4	
Pilbeam, G. W.	278	15		Seringeour, James	421	14	
Pilkington & Lane	52	2	1	"	420	1	1
Pillsbury, S. & Co.	67 68	69	10	"	522 523	2	1
Plate, A. J.	470	5	2	Sellers, Wm. & Co.	895	18	2
Pool & Carlton,	720 868	13		Severance, H. W.	46	16	1
Porter & Collins	631 652	3		Shakespeare, Rella	906	21	
Portois Peter	400	5	3	Sherman, O. M.	514	4	
Portois Peter	401	13		Shew, William	from 172 to 190	16	2
Potter, A. F.	37	5	2	Shirley, Silas	878	13	
Pracy, G. T.	874	7		Shourds, G. W.	880	12	
Pracy, G. T.	9, 10	1	1	Simpson, D.	220	2	2
Pracy, G. T.	from 11 to 15	2	1	Siebert, Frank	507	20	3
Pratt & Co., H. G.	834	4		Silver, Mrs. W. J.	740	16	4
Prevost, Mrs. L.	340	20	1	Singer Manufacturing Co.	746 747	19	
Price, L.	191	14		Siomonean, J.	914	10	
Price, M.	398	7		Smith, William	909	5	1
Prousergue, Antoine	78	19		Smith, T. R.	174	13	
Provost, D. R.	397	20	2	Smith, D. S.	679 680	4	
Pryte, Eliza	145 146	19		Smith, D. L.	891	4	
Purdy, Samuel	139	10		Smith, A. V.	51	2	2
Putzman, F.	199	20	3	Smith, G. W.	763	15	
Quick, J. W.	248	2	2	Smith, C. W. M.	537	4	
Ramsome, Mrs. M. A.	284	19		Smith, A. P. Bros. & Glover,	762	18	2
Ravenna, Ghiradelli & Co.	62	20	2	Smith, H. S.	717	1	1
Reddington, Hostetter & Co.	835	2	2	Smith, George	867	20	1
Reed, O. W.	100	20	1	Smith, Holland	254	21	
Regensberger, Mrs.	127	19		Smith, A. P.	336	20	1
Reiley, B.	282	5	1	Smith, Mrs. John	780	19	
Reiley, B.	281	13		Snow, John F.	561	21	
Reiley, Mrs. Lawrence	150	19		Soloman J.	70	16	1
Remmel & Oterson	741	20	3	Son & Briggs,	332	9	
Reynolds, Miss N.	804 810	16	4	Sonenenbergs, Cecelia	336	16	2
Rhea, W. H. & Co.	43	20	3	Sonntag & Co.	517	10	
Richard, W. T.	852	3		Spaulding, J.	92	2	2
Rider, B. P.	632	2	2	Spaulding, A.	666	15	
Ries, William	700	9		Spaulding, N. W.	673	7	
Riley P.	389	7		Squires Edwin	411	1	1
Risdon Iron Works	385	7		Stacy O. F.	355	5	1
Risdon Iron Works	617	3		Standard Soap Co.	330	10	
Roach, John	324 325 326	327	6	Standard Soap Co.	331	7	
Robertson, John D.	169	20	3	Stebbins, T.	30	2	1
Robins, Louis S. per W. F.				Steele, J. G. & Co.	75	10	
Herrick.	898	10		Stemson, A. L.	227	12	
Robinson & Romain	879 880 881	882	2	Stemson, A. L.	226	7	
Robinson, Miss Ella	333	16	2	Stevens, C. W.	381	2	2
Robinson, E. N.	406	5	3	Stockton, E. A.	382	8	
Robinson, E. N.	410	10		Stoddart, W. J.	592, 502	21	
Robinson, D. N. & Son	721	21		Stoddart, David	525, 529	1	1
Robson, Mrs. H.	162	19		Stoddart, David	526, 527	1	2
Romer, C.	413	15		Stoddard, David	528, 530	7	
Root, Miss. Clara M.	107	16	1				
Root & Nye	504	7					
Rose, Geo. P.	43	10					
Rosenberg, A. A.	472	17					
Rosenberg, A. A.	473	16	2				
Rosenberg, A. A.	474	12					

	No.	Cl.	Sec.		No.	Cl.	Sec.
Stone & Hayden,	215	14		Walker, Samuel	from 4 to 22	16	1
Stott, A. W.	796	12		Wallace, P. R.	670	1	1
Strahle & Hughes,	242, 233	15		Wamsley & Smith,	637, 639	1	2
Strauss, Miss Henrietta,	222	19		Walters, T. G.	304	13	
Strentzel, Dr. J.	608	20	1	Walton, E. W.	616	4	
Strentzel, Dr. J.	609	20		Wan Yune Lung Kee,	942	21	
Strentzel, Dr. J.	610	20	2	Warner, M. D.	700	5	3
Stringer & Co	702	10		Warren & Co.	926	4	
Sublett, W. A.	853	7		Warren, C. Butler	777	12	
Sullivan, Mrs. James	394	19		Warwick, J. H.	298	18	2
Sullivan, Mrs. James	395	12		Warwick, J. H.	639	10	
Suplee, Mrs. A. H.	744, 745	19		Waterhouse A. G.	753	5	1
Suplee, Mrs. A. H.	900	19		Waterhouse, A. G.	885	2	1
Suplee, Mrs. A. H.	923	7		Watkins, C. E.	from 191 to 230	16	1
Suter, Jeannett	870	19		Watson, Mrs. E. H.	676	19	
Sutherland, Mariah	805	19		Watson, W. P.	4	4	
Sutton, J. W.	94	2	2	Watson, Mrs. C. W.	933	20	1
Suydam, Mrs. M. A.	486	6		Weiner, Alfred	188	2	
Swain, R. A. & Co.	823, 443	9		Weller, Mrs. P.	841	19	
Swain, R. A. & Co.	376	16	2	Welty, James B.	418	20	1
Swan, W. B.	711	12		Welty, Miss Nellie	204	16	4
Swanton, Mrs.	792	16	4	Wempe, H. L.	663	21	
Sweet & Gadsby,	903	16	3	Wendel, H.	593, 594	15	
				Wentworth, May	68, 69	16	1
Tarleton, G. W.	603	20	1	West, George	521	20	1
Tay. Brooks & Bickus,	854	7		Westley, Thornton	565	15	
Taylor, S. P. & Co.	54	8		Weston, Miss Annie	468	19	
Taylor, Mrs. Robt.	800	16	4	White, Miss Winifred	786	16	4
Taylor, G. A.	1	3		White, W. A.	690	8	
Taylor & Co.	177	12		White, J. F.	461	15	
Taylor, D. C.	321, 322	16	2	White, Henry	7	12	
Taylor, A. C.	833	5	3	Whiting, Mrs.	861, 267	14	
Thayer, I. E.	791	5	1	Whitney, Jacob	213	8	
Thayer, I. E.	485	8		Whitney James	214	7	
Thorburn, Mrs. H. T.	320	19		Whitney, Geo. O. & Co.	564	15	
Thompson, R. S.	714	20	1	Whittier & Fuller,	790	9	
Thompson, Bros.	862	3		Whymper, Friedrick	111, 112	16	1
Thurnaur & Zinn,	872	16	2	Widie, Mrs. John	117	16	4
Tibbets, Helen A.	109	16	1	Wilcox, M. & A.	821	1	1
Tomsky, Louis	723	16	3	Willite, P. G.	241	2	2
Touner, Servais	337	20	1	Will & Finck,	553	7	
Traverse, C. P. & Co.	24	2	2	Willey, O F.	455, 456	13	
Treadwell & Co.	from 306 to 310	4		Williams, R. M.	325	13	2
Treadwell & Co.	305	1	1	Williams, A.	365	2	2
" "	703	4		Williams, A.	387	4	
Tracy, Mrs. E.	813, 809	16	4	Williamson, Robert	423	20	1
True & Co., H.	345	21		Williamson, C. E.	915	19	
Traworthy, F. M.	76	11		Willis, M.	588	17	
Tyler, Bros.	201	12		Willis, E. H.	6	4	
Upton, E. A.	276	20	1	Wilson, John	From 32 to 41	16	1
				Winn, M. L.	917	7	
Vail, K.	635	7		Wissinger, J. W.	662	8	
Van Denberg, Dr. J. P. P.	250	21		Wolcatr, Mrs. C. P.	123	19	
Van Dusen, Mrs. A.	261	19		Wolfe, J. E.	From 326 to 332		
Varney, Thomas	501	3		Women's Co-operative Union,	499	19	
Varney, Robert	193	21		Wood, Geo. M. & Co.	178	11	
Vaughn,	from 231 to 243	16		Wood, Dr. J. H.	270, 271, 272	16	2
Velbert, P. H.	144	19		Wood, Dr. J. H.	595	20	3
Vincent, D. B.	685	10		Wood, Dr. J. H.	536	10	
Vintage Brandy Co.	757	20	3	Woods, W. H.	665	1	1
Vorbes, Ephraim	111	21		Worth, Obed	750	20	1
Vulcan Iron Works.	849	7		Yates, Dr. L. G.	591	10	
				Young, T. D.	351, 352	2	1
Wakeman, E.	682	5	1	Young, Mrs. A. D.	236	16	4
Waite, George	377	10		Yune, Wom & Lee Yuch,	412	20	1
Waldron, Mrs. A. D.	160	8		Yung, Lai	101 102	16	1
Waldrum, Lyttleton	60	20	1				
Walker, J.	240	10		Zech, Jacob	233	17	
				Zeelandelaar, A.	782	21	
				Zvick, Charles	171	10	

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